DOCUMENT RESUME

ED 292 981 CE 049 910

AUTHOR Parsons, Cynthia
TITLE The Bridge: Cooperative Education for All High School Students.
INSTITUTION William T. Grant Foundation, Washington, DC. Commission on Work, Family, and Citizenship.
PUB DATE [88]
NOTE 116p.; A product of Youth and America's Future. For other papers in this series, see CE 049 906-912 and CE 049 914.
AVAILABLE FROM Institute for Educational Leadership, 1001 Connecticut Avenue, NW, Suite 310, Washington, DC 20036-5541 ($10.00).
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Change Strategies; *Cooperative Education; Educational Benefits; *Educational Needs; *Education Work Relationship; Financial Support; High Schools; Instructor Coordinators; *Program Content; *Program Improvement; Teacher Role; *Vocational Education; Vocational Education Teachers; Work Experience Programs; Work Study Programs

ABSTRACT

Every high school student should not only be provided with appropriate academic instruction but with supervised work experience as well. For the past 70 years, the number of students in cooperative education programs has grown steadily. Despite these steady gains, the best estimates place no more than 10 percent of all vocational education students in cooperative education programs today. It is true that traditional vocational/technical classrooms and shops can provide an introduction to a job or career path; however, they cannot instill good work habits or provide the reality and immediacy of an actual job placement. Cooperative education programs need guidance counselors and cooperative education coordinators who can broker job placements, match students with appropriate jobs, and hold seminars or workshops emphasizing good work habits. In cooperative programs, work supervisors become part of the "faculty" in the sense that they guide, grade, counsel, and teach students. Vocational teachers must in turn adjust course offerings and the curriculum to integrate course work not only with students' job demands but with their full academic schedules as well. In other words, employers and school officials must work hand in hand to ensure that basic work and career lessons are learned. The goal of cooperative education should be to replace the floundering between school and career with connectors, ties, links, and bonds. (This paper includes commentaries by Roy L. Wooldridge, David H. Lynn and Dennis Gray, and Morgan V. Lewis.) (MN)

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The Bridge:

Cooperative Education for All High School Students

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Youth and America's Future:
The William T. Grant Foundation Commission on Work, Family and Citizenship

YOUTH AND AMERICA'S FUTURE:

THE WILLIAM T. GRANT FOUNDATION COMMISSION ON WORK, FAMILY AND CITIZENSHIP

When William Thomas Grant established the Grant Foundation in 1936, he sought a better understanding of the ways in which individuals adapt to the vicissitudes of life. Touched in his professional life by the importance of good human relationships, Mr. Grant wished to "help children develop what is in them" so they would better "enjoy all the good things the world has to offer them."

Fifty years later, recognizing the special needs of older adolescents in our changing society, the Foundation's Trustees established **Youth and America's Future** with much the same purpose; its charge is to evaluate current knowledge, stimulate new ideas, increase communication among researchers, practitioners and policymakers, and, thus, to help our nation chart a better future for youth.

The Foundation's President, Robert J. Haggerty, M.D., has described the Commission's unique perspective:

"Against a rising chorus of legitimate concern about the many problems facing today's youth, the Foundation has initiated this Commission on Youth and America's Future to speak in a different voice. It will explore the strengths of America's young men and women, their famlilies and the programs and community institutions that serve them. We adopt this approach not to diminish the importance of the problems that exist, but to learn the lessons of success. The Foundation is confident that this effort to look with renewed respect at youth, where it strides as well as where it stumbles, will help forge the links of understanding and mutual responsibility that make our democracy strong."

The publications in this series have been prepared to inform the Commission and to stimulate its thinking. While the Commission does not necessarily endorse the various findings presented, it does encourage their thoughtful consideration in the interests of American youth.

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THE BRIDGE:

Cooperative Education for All High School Students

Cynthia Parsons

This paper was prepared for the Commission by **Cynthia Parsons**, Coordinator of SerVermont and former long-time Education Editor of the Christian Science Monitor.

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THE BRIDGE:

Cooperative Education for All High School Students

Cynthia Parsons

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EXECUTIVE SUMMARY

This paper calls for a radical and fundamental change in all U.S. public high schools. It calls for these schools to provide every student not only with appropriate academics, but with supervised work experience as well.

For 70 years, a few students in a few public high schools have had the opportunity to bridge the period between full-time schooling and full-time work, by working part time and going to school part time -- guided and graded by both academic teachers and job supervisors.

And each year, for 70 years, the number of students in such cooperative education programs has grown steadily; and while the majority of 11th and 12th grade students today coop in sales occupations (distributive education), there are students receiving on-the-job training in every skill area.

But the best estimates place no more than 10 percent of all vocational education students in coop ed programs; some 90 to 95 percent of students in the vocational high school track are not enrolled in courses where the academic instruction is integrated with on-the-job demands.

Traditional vocational/technical classrooms and shops can provide an introduction to a job or career path, but they cannot instill good work habits nor can these simulated work

sites provide the reality and immediacy of a real job placement in a store, bank, office, garage, factory, etc.

Schools offering coop ed, must have cooperative education coordinators (approximately a 40:1 student/coordinator ratio), as well as guidance counselors.

The coordinators broker the job placements. This requires that they know the job market as well as they know their students so that the match up will succeed. These coop coordinators also are responsible for holding seminars or workshops emphasizing good work habits.

Work supervisors, for coop students, become part of the "faculty" for the student; they guide, and grade, and counsel, and teach. This, too, is a fundamental change for the school staff which previously has not shared student evaluation with "outsiders."

In addition, the teachers in a coop ed school must adjust course offerings and the curriculum to integrate course work not only with each student's job demands, but with each student's full academic schedule. More than team teaching, the goal is integrated learning.

The school schedule, too, has to be adjusted to meet the needs of those students who must alternate periods of study with periods of work.

Coop ed, when engaged in for a full student body, may prove to be less costly and more efficient than the traditional mix of vocational, general ed, and college prep classes in a comprehensive high school. All costs for

equipping and maintaining costly vocational shops will be removed; also, with half the student body away from school at their job sites, school plants as well as teaching staffs may be utilized with greater efficiency.

Unfortunately little research has been done on coop ed at the high school level; and even the data related to vocational/technical schooling at this level is sketchy at best. We don't know if 100% of the high school students in any given community could be absorbed by local employers; we don't even know if 20% could be.

We don't know how many students a coop ed coordinator can handle.

What about colleges and universities providing preservice training for teachers: Are they teaching potential teachers how to integrate subject matter with work assignments? Are they being taught how to integrate their subject matter with that of another discipline?

What do teachers know about work/study and experiential education? Where can college students go for preservice training in these? What about inservice training in experiential learning?

And the major question: Will schools accept the challenge that they must prepare their students for jobs and careers, and that they must guide and supervise on-the-job training while students are still under their care?

The estimates fluctuate anywhere from 50 to 90 percent; the estimate of how many high school youngsters hold down jobs during the school year.

While any job is better than no job, it is the thesis of this paper:

* That much of the work students do be integrated with what they are learning at school;
* That employers work hand-in-hand with school officials to insure that basic work and career lessons are learned;
* That together (students/parents/teachers/employers) they build the bridge connecting full-time schooling with full-time employment; and
* That the goal be to eliminate that time of "floundering" between school and career, replacing it with connectors, ties, links, and bonds; that is, with a bridge.

It is not the purview of this paper to detail how schools without a coop ed program should initiate one, nor to recommend how schools with coop ed programs should expand them to include the whole student body.

While it is not "enough" to describe the need; it is a start.

>>>

On defining terms:

"Coop Ed" "Work Study" "Experiential Ed"

To oversimplify:

Experiential education often means a "life" experience (a field trip to a fish cannery with some time spent working alongside regular employees in order to "experience" what it means to work in a fish cannery) which is then used by educators to "bring classroom study alive."

Work Study most often refers to a job which may or may not (most often not) relate to the academic work being done by the student, but which is expected to teach students such important work attitudes as promptness; cooperation with co-workers; taking orders; compensating for absenteeism; etc.

Coop ed is short hand for "cooperative education" and when correctly applied weaves academics with work experience -- as related as possible to the academics and to the student's career interests. The British use the term "sandwich course" to describe how a coop ed student sandwiches classroom time between related job experience, or vice versa.

>>>

An excellent coop ed program includes experiential ed experiences, some work study, and academics incorporating basic skills, the humanities, and related business training.

While coop ed is used in connection with vocational schooling, having a major part to play in a school-produced dramastic production is an example of "coop ed," and may help to clarify what is meant by "sandwiching" class work with job work.

The student who has a character part in a play, or who works on the set design, lighting, etc. studies plays in English classes, reads the particular play in question, probably does research about the author, the play's origin, the period in which it is set, etc.

History, English, composition, social studies, perhaps science, and surely all humanities instruction can be made relevant to this specific production.

Time spent in rehearsals, designing the sets, working the lights, etc. are sandwiched between classes. But the two are essential -- the one to the other -- and the more the teachers involved cooperate and integrate the two methods of learning, the richer the experience for the students involved and the finer the performance.

So, too, the experience of the student who "coops" in a retail store, gas station, small engine repair shop, dry cleaners, public health clinic, factory, parks department, bank... In coop ed, the employer is a teacher and a guidance counselor and works in tandem with the coop ed coordinator.

As Paul Barton states the advantages of coop ed:

1) Learning occupational skills is aided by real experience.
2) The school and employer must work together, identifying weaknesses and remedying them before graduation.

3) Joint work-study programs provide a job connection after graduation.
4) The market test is applied all the time; employers will not participate in imparting skills for which there is no demand.
5) Cooperative style education reduces the problem of keeping up-to-date equipment in the classroom.
6) In general, such arrangements force school and employers to talk to each other.

>>>

There are difficulties with coop ed:

1) Few skill-training teachers know how to integrate their training with academics.
2) Few academic teachers know how to integrate their coursework with the needs of students who must apply their academic knowledge to occupational skills and job requirements.
3) It requires a very different school counselor from the one who tries to match pupils and the appropriate next steps into higher education. The coop ed counselor must know (and possibly have worked in) the employment areas in which he is placing students; also must know how to evaluate (and help the employer to evaluate) job-related skill levels.
4) Many rural and suburban areas offer a limited number and scope of employment experiences.
5) Depending on how much time is given to "on the job" training, accumulation of credits for graduation may take more than the usual four years. Also, students' work schedules may interfere with co-curricular activities limiting coop ed students from a full and rich secondary school experience.

The advantages, I argue in my paper, far outweigh the difficulties. Integrated, articulated schooling is a goal not just to be striven for, but reached. For both employers and students it means learning "real" skills, using "real" equipment in "real" work settings.

-- Cynthia Parsons

COOPERATIVE EDUCATION IN UTOPIA

Mary went to high school in a medium-size town.

When her guidance counselor first met with her in grade 9, Mary indicated a budding interest in fashion as a possible career path she might follow. At the same time, she explained that her family was eager for her to go on to college after high school.

The guidance counselor provided the cooperative education coordinator with Mary's cumulative academic record folder, and with her interest in merchandising/retailing. Together they worked out a schedule of courses combining college-prep with coop vocational.

Mary took such courses as: bookkeeping and algebra; accounting and geometry; public speaking and English literature; contemporary American thought and ancient history.

During grades 9 and 10, she spent full time in school, and worked intermittently in local retail stores after school, weekends, and holiday periods. The coop ed teacher helped her get some of the jobs; others she got on her own.

During grades 11 and 12, Mary began a coop ed schedule which placed her full time in a store for two of her school's four marking periods of 10 weeks each. She worked in one

store during grade 11, and over the following summer. She transferred to another store (sports equipment) for grade 12, as she'd begun to decide on sports fashions as her main interest.

When Mary was not working at either store, she was in school full time, and another coop ed student from her high school filled the same job slot.

Both Mary and her other "half" (a different student each year) met with 20 other coop ed pairs in a seminar course to discuss work-related issues throughout the 11th and 12th grade academic years. This seminar received full academic course credit each year, had reading and writing assignments, and was team taught by school staff and representatives of the cooperative businesses.

Mary, tall and lithe, was a varsity basketball player, and with help from her guidance counselor and coop ed coordinator, arranged her year so that she worked full time for the first and last marking periods, and was a full-time student from the second week in November through the first week in April.

Mary also was active with the school newspaper and yearbook, and because she worked Saturdays, she was able to arrange her 40-hour work weeks at the two stores so that she could be at school for those extra-curricular club meetings even during her coop work terms.

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Hernandez attended a large-city high school which operated two sessions a day. Since the summer after 10th grade, he was a coop ed worker/student in a local bank.

That first summer, he didn't do much but run errands. But when the school year started, Hernandez began working in the data processing department, punching in on the clock at 8 A.M., and out at 12 noon weekdays; then arriving at school at 1 P.M., and taking classes until 4 P.M.

Besides the required academic courses, he was enrolled in a set of computer workshops or short courses; here he learned to operate a series of increasingly complex business computer systems.

Hernandez was on the track team, and had to do his practice afternoons. And since some track meets pulled him out of class a few days of the year, he had to do "make-up" course work on his free time.

Hernandez, who had asked for the data processing job at the bank, did so because of his interest in and skill with computer technology. His high school had a number of computers and some good computer technicians as teachers. He found that his work at the bank helped him with his computer course work at school.

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Willie Mae, in the same year at the same high school as Hernandez, filled the data processing job slot at the bank by starting her work day at 1 P.M. and ending at 5 P.M. Willie Mae started her school day at 8 A.M., and her last class was

over by 11:20 A.M.

She was not scheduled in the same seminar as Herndandez because his met in the afternoons and hers in the morning. But she and Hernandez did have a computer project they were doing together for their computer II class. They were using bank rate fluctuations to make predictions based on what they learned on the job, and what they studied with their mathematics teacher.

Willie Mae decided to meet her physical education requirement by joining a local swim club, and with two of her co-workers from the bank, swam three afternoons a week after work.

During his senior year, Hernandez got interested in computer programming, but the bank kept him doing data processing for his entire work period. Because he was quick at the work he was doing at the bank, they invited him to stay on after high school as a full-time employee.

But Hernandez wanted to go on to a city college, and get a degree in computer programming. The bank compromised with him asking him to work full time over the summer and 30 hours a week when he was going to college. They sweetened the proposal by offering to reimburse him for the cost of his tuition for any course he passed with a C+ or better.

Willie Mae, on the other hand, decided not to go on to college after graduation; nor did she apply to the bank for a full-time job. Instead, she took a job in the data processing office of a large department store, where she could stretch her 40-hour week over six days, and be able to augment her

earnings with the store discount.

Her coop ed coordinator helped her find the store job even before she finished working at the bank. This meant she could start the new job as soon as she finished her school course work.

>>>

George lived in a rural area, sometimes with his mother, and sometimes with other family relatives. Most of his school years were difficult, and he had to repeat 3rd grade. When he got to the 9th grade, the only job the coop ed counselor could help him get was one helping the custodian at the high school.

And the only jobs the custodian would give him were cleaning.

He did a good enough job cleaning up after a basketball game that the coach bothered to praise him; also offered to give him a free pass for all home games.

The general science teacher backed up George's cleaning job, by getting him involved with some of the college-prep chemistry students in some lab work analyzing cleaning agents.

By the time George got to the 11th grade, he and the coop ed coordinator were able to get him two nightime jobs (midnight to 4 A.M.) doing the cleaning; one for a grocery store, the other for a public health clinic.

Also the coordinator worked out George's school schedule so that his classes all met in the early afternoon,

giving George the mornings to sleep.

He still worked with the school custodians, and when he graduated took a full-time job on the custodial staff at the high school, and immediately took on a young coop ed student as a helper.

>>>

Anna was enrolled in a large urban high school, had no sepcific work or academic interests, no hobbies, and joined none of the school's many extra-curricular clubs.

Her 9th grade guidance counselor, after Anna said she didn't need or want an after-school job, didn't send her file onto the coop ed coordinator.

At the close of her 10th grade year, Anna's file was sent automatically to one of the coop ed counselors who had to set up five appointments before Anna showed up.

"No!" emphatically, she did not want help getting a summer job; she would be "with friends" all summer.

Fall, junior year, the coop ed counselor made an appointment with Anna after reviewing her cumulative academic folder and finding a scattering of D's, but mostly C's. And also finding that Anna was absent several days each month.

"No," definitely, Anna did "not want an outside job." "No, working in a clothing store was boring. No, I don't like office work and I can't type. No, I don't like waiting on table, customers are always changing their orders."

Finally they agreed on a job, and Anna was assigned to work in a nearby daycare center starting at noon and ending

each day at 6 P.M. First, she was assigned food preparation and clean-up jobs, and not allowed to work directly with either the infants or the toddlers.

But as her work and attendance improved, she proved to be genuinely interested in playing games with the older toddlers, particularly word games and picture puzzles. Her supervisor told the coop ed coordinator about Anna's improved "attitude," and suggested that Anna's English teacher should reinforce the word-game interests.

By the late spring of her 11th grade year, Anna took a hand in deciding along with her coop ed coordinator and guidance counselor which courses she should take her senior year: two English, one in children's literature and one in public speaking; a contemporary history; and an ecology class. These classes met in the mornings; Anna continued her job at the daycare center in the afternoons.

She was enrolled, as well, in a coop ed seminar along with other seniors working with infants and children in one capacity or another. For her contemporary history class, she, along with two others in her seminar, wrote a paper comparing day care facilities in Scandanavia with those in the U.S.

>>>

Utopia! Mary, Hernandez, Willie Mae, George, and Anna all appear to have dealt with cooperative businesses with no union interference and bosses willing to be part of the

early-training and education team for high schoolers. They appear to have had sensitive and intelligent coop ed coordinators and guidance counselors.

Also, they attended schools where the teaching staff willingly adopted teaching methods and schedules to support part-time job assignments by their students.

All five stayed in school and at their jobs. All five didn't move out of the school district during their last two years of high school. All five stayed healthy enough to meet their academic and job responsibilities.

>>>

If, as this paper is recommending, every high school student should coop during the 11th and 12 grades, then Anna's large urban school of 1,800 students would need to place some 900 students in jobs with employers willing to do an enormous amount of attitude and skill training while still running a business.

And the guidance and coop ed counselors would have to know both the job market and the 900 students well enough to mix and match intelligently and successfully.

The entire academic staff would have to know about job skills and training needs outside the school work setting; and every teacher would have to know how to build a curriculum around the needs and abilities of the students, and have to adjust for class attendance on a less-than-consecutive daily schedule.

And the area's economic stability would have to be such

that there were 900 jobs waiting to be filled by part-time students; 900 work supervisors willing to do evaluations of student workers. And all 900 students would have to be alert enough to get to both school and job, alternately, for two consecutive years.

As of this writing, only about 10 percent of high school students across the U.S. both work and go to school in a coop ed setting. Only about 10 percent of the nation's high schoolers have their job supervisors and their academic counselors working together to both design learning packages and work out evaluation and grading schemes.

Only about 10 percent of our school youth (of the more than 90 percent found to hold some kind of job) hold a job which is supported by their regular course work; or conversely, are encouraged to use what they learn at work to complete class assignments.

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FIVE IMPORTANT ASSUMPTIONS

1. It is better for a high school student to have some work experience than to have none at all.

2. It is better for a student to learn good work habits (promptness, courtesy, follow-through, orderliness, honesty, etc.) than to not have that opportunity.

3. It is better for a student to learn at least one measurable rudimentary skill than to leave school with only academic credits.

4. It is better for a student to have guided work experience than to hold random, minimally-supervised jobs.

5. It is better for a student to receive school-supervised work experience and skill training in a real job setting than in a school shop or simulated workplace.

>>>

Before you find yourself agreeing with the first assumption -- certainly sounds reasonable -- let's take a look at what's offered most students in most U.S. secondary schools.

There's the college-prep track or program or course offerings or however it is categorized around the nation. In only the rarest of instances is any thought whatever given in any U.S. public school to including credit for work experience for students in the college-prep program.

And since school credit is the "coin" of the high school realm, and particularly of the college-prep program, the message given by schools to students is that "no work experience" is necessary.

That message also includes the implication that schools have "done their duty" by their college-bound students even though they had not included work experience as part and parcel of their school diet.

In addition to the college bound, most high schools place a strong percent of their students in a "general education" program which, like the college-prep curriculum, does not include skill training or work experience. Instead, these students are offered a selection of courses, athletic opportunities, and club activities all providing credits toward a graduation degree or certificate, but no school-sponsored, school-credited, or school-related work experience.

What's left, nationwide, is a small percent of high school students who, with school assistance, get sound work experience.

And yet, what's also true is that a huge percent (some put it at as much as 90%) of all students work during their high school years.

One argument often given for why schools don't include more students in coop ed programs is that employers are unwilling to do the necessary training of unskilled youth workers, and therefore coop ed programs cannot expand.

That contention obviously flies in the face of reality; thousands of employers want and seek student workers, and provide necessary training, equipment, uniforms, job benefits, etc.

Another argument put forward is the one connected to course load and time: Hard-working college-prep students, with their heavy academic schedule of courses and homework, and extra-curricular activities, so goes the argument, have no time or energy left to coop. Or a comparable argument: College-prep students cannot afford to "sandwich" course work between work assignments, and need to concentrate on their academics so that they can get into the college of their choice.

These arguments, though, don't hold up against the results of nearly 80 years of secondary school level coop ed programs carried out by college-bound students.

In fact, for many of the highly selective college admissions' officers, a transcript showing a coop ed work

experience is more often a plus...provides the college another measure of why one student seems to be more promising than another.

Moving along to the second assumption -- good work habits -- here we have a clear message from employers in all sectors of the economy. Even more than job skills, personnel officers nationwide contend, is the need for entry-level workers, particularly teen-age high school graduates, to bring good work habits to the job site.

"We'll gladly train them in the necessary skill(s)," they argue, "but send them to us already knowing what it is to follow orders, pay attention, be part of a working team, call in when they can't get to work..."

The call for an understanding of "teamwork" is particularly appropriate for today's school officals and teachers. Today, teachers require that an enormous amount of academic school work be done without teamwork, yet most work assignments call for a blending of ideas, skills, talents, and elbow grease.

Even the academic teachers can help teach some of these good work habits; and they can begin to not only welcome "team" efforts for doing assignments, but teach in such a manner that those qualities which make for a good worker are the same qualities they honor for good academicians.

Which brings us to assumption number three and its call for students to leave school with a job skill as well as

with sufficient academic credits.

In general, U.S. public schools have not accepted this assumption as a guiding principle for syllabus and curriculum. And when they have offered skill training, it has more often than not been limited to a school setting, and not worked out in conjunction with a non-school employer.

Sewing, cooking, typing, radio repair, small engine repair, electrical wiring, welding, brick laying, even word processing skills have, in traditional vocational or technical education classes been learned in a classroom setting, with next to no time spent practicing the skill -- while under school supervision -- in a real work site. (Please see Tables 1, 2, 3.)

That is, schools don't provide real jobs except in cooperative education programs; or where the school work site is to all intents and purposes an "outside" work site. For example, where the school operates a working motel serving the public and uses coop ed students in all facets of management, maintenance, and service.

And this brings us to the assumption that students will learn more and be more attractive to future employers if the work they do while still students is guided by both the school personnel and cooperating work supervisors.

If we look back at Mary's school/work experience, we can see how much her interest in sports, and her school's interest in her retailing future combined to place her on an appropriate career path with good work habits, and sound retail sales skills.

Bookkeeping, accounting, public speaking, contemporary American thought: These courses aided Mary academically while her job supervisors helped her deal intelligently with customers, with sound business practices, with an understanding of how to use her "outside" interests to improve her job performance.

For Willie Mae and Hernandez, data processing in a classroom setting might have seemed "routine" or "abstract," but when your employer, a bank, counts on your data for making business transactions, that's serious and tangible.

While Willie Mae and Hernandez might have picked up some good and important work habits had they mowed lawns, baby sat, washed and bused dishes, served fast food, and worked a toy counter as a sales clerk, they would not have honed a skill, as they did the data processing.

Entry-level, dead-end jobs can teach an active teenager a lot of lessons, but not as many as they can learn by developing a skill, and by integrating their academics with their work experience.

George was fortunate to have a science teacher who was quick to recognize what it would do both for George and for his college-bound chemistry students to work together experimenting and writing up material on cleansing agents.

And Anna, who wanted to play word games, lead skits, put on puppet shows, and help develop toddlers' language skills, sorely needed to learn about childrens' literature from a scholar. Anna needed not only to learn to

want to work, but needed to see a reason to study so that her work experience would be fulfilling.

She needed the public speaking lessons, so that she would know how to help her little ones with diction and pronunciation. And from her ecology lessons at school, Anna could devise activities for her charges which would sharpen their love for and understanding of the natural world.

At first, it must have been very difficult for Anna's supervisor in the daycare center to get Anna past the stage of being a passive babysitter, and to become engaged with wholesome learning activities for the children. But how important that Anna got that chance. And that she got it in a work setting where failure to measure up would mean being fired.

Of course, if Anna's school had run a daycare center along professional lines, serving the public, and enforcing personnel rules and regulations, then Anna could have gotten a similar work/study experience under the one school roof.

But, I would argue, if Anna's class had just invited a few children in for a few days a semester, that would not have provided Anna with the full work experience; with the full professional standards necessary in a real job setting. Yes, Anna might have developed some skills in dealing with toddlers if she had only gotten jobs as a baby sitter, but not to the same degree, nor with the expert evaluation and assistance which would come from working with strong professionals.

TABLE 1

HIGH SCHOOL COOP ED ENROLLMENT BY OCCUPATION
1980 * 1981 * 1982

Program	1980	1981	1982
Marketing/Distributive	198,636	193,215	206,315
Trade & Industrial	151,002	150,298	135,292
Business	120,501	146,319	191,743
Home Economics	39,216	44,522	47,441
Other	33,028	30,460	17,439
Agriculture	25,342	28,372	72,006*
Health Occupations	19,842	20,007	20,950
Technical	9,997	10,548	38,852**
TOTALS	597,564	623,741	730,038

Source: National Center for Education Statistics, ED

* Rise is not in farm work, per se, but in agri-business and related nursery/florist/gardening occupations.

** Reflects impact of computer industry.

TABLE 2

HIGH SCHOOL COOP ED ENROLLMENT
IN 1980
COMPARED TO ALL VOC ED ENROLLMENTS

Program	All Students	Coop Ed Students
Office Occupations	1,970,518	120,176
Trade & Industry	1,792,052	149,373
Distributive Ed	601,275	198,380
Health Occupations	455,129	19,996
Agriculture	384,940	25,332
Technical	387,117	10,282
Home Economics	242,087	39,096
Other	146,390	33,028
TOTALS	5,979,508*	595,663**

Source: National Center for Education Statistics, ED

* Table 5 gives 11,763,539 as total vocational student enrollment for 1980. Perhaps the radical difference comes from the counting method, and the lower figure here represents only those high school students enrolled in programs also served by coop ed.

** This figure is 1,901 students fewer than the enrollment figure given in Table 1. Most important, though, is whether, in 1980, coop ed enrollment was 5% of the total vocational enrollment, or 10% as indicated on this chart.

TABLE 3

PROGRAM SELECTION CHANGES
IN
HIGH SCHOOL COOP ED ENROLLMENTS 1980 * 1981 * 1982

Program	1980
Marketing/Distributive	198,636
Trade & Industrial	151,002
Business	120,501
Home Economics	39,216
Other	33,028
Agriculture	25,342
Health Occupations	19,842
Technical	9,997
TOTAL	597,564

Program	1981
Marketing/Distributive	193,215
Trade & Industrial	150,298
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Agriculture	28,372
Health Occupations	20,007
Technical	10,548
TOTAL	623,741

Program	1982
Marketing/Distributive	206,315
Business	191,743
Trade & Industrial	135,292
Agriculture	72,006
Home Economics	47,441
Technical	38,852
Health Occupations	20,950
Other	17,439
TOTAL	730,038

Source: National Center for Education Statistics, ED

EVERY STUDENT NEEDS A BRIDGE

Coop ed is that essential bridge taking students from full-time schooling to full-time employment.

Talking about work. Watching people work. Reading about economics and business. Visiting a work site. Doing odd jobs or unskilled labor outside of school with or without pay. Lab work. Classroom experiments. Shop classes. Volunteering in the community.

All these activities are good, worthy, important, and certainly help youngsters develop and grow and prepare for adult living.

But none of these are "bridges" in the way that coop ed is a bridge. They are, though, important pieces of the approach roadway.

>>>

Roget's Thesaurus:
bridge n. 2 connection, connector, tie, link, coupling, bond, band, nexus, joint.

Webster's 2nd College Dictionary:
bridge n. 2. a thing that provides connection, contact, or transition.

>>>

Coop ed is "a thing that provides connections, contacts, and transition" from school to work.

By integrating academics with job skills; that is, by connecting classroom learning to on-the-job demands, students

learn not only what it is to work, but how to work; and further, how to use "book learning" to advance on a job site.

This is almost equally true for straight academic study as it is for special related academics. For example, a coop ed student holding down an afternoon job in a retail store, or business office needs to be taught some accounting, some business theory, speaking skills, business arithmetic, and so forth.

Yet history courses are equally important for that inner understanding of what makes our political and economic system work.

Sound teaching in advanced math courses develops an understanding of logic, organization, and structure -- three essential abilities for anyone planning a career in retailing or business.

Active learning and participation in the arts develop a student's sense of beauty, culture, and grace. Again, essential for retail and business careers.

Not to mention the obvious advantages of speaking and understanding more than one language.

Whether one is preparing for a career in retailing in automobile maintenance in accounting in assembly-line manufacturing or in a business office; or whether one is college-bound heading for a profession in medicine, law, education, or business management, the need is two-fold: to be as educated and alert to new ideas as possible, and to have learned some of the basic skills essential to one's chosen occupation.

If coop ed had not already been invented, it would need to be right now. There are few jobs which are life-time repetitous. Technological advances touch almost every aspect of today's businesses; hence today's skills won't be sufficient tomorrow. Our school students need to know how to relearn; that is, need to know how to prepare for change and accept change while still performing commendably.

Knowing today's skills is absolutely necessary for initial employment; and knowing how to learn new skills is absolutely necessary for continued employment.

Clearly, the "general education" program which is in place in all comprehensive high schools throughout the U.S. must be eliminated. As presently constructed, the general-curriculum courses are not applicable for college preparation; nor do they qualify as vocational instruction.

They are an absolute dead end. Not only are they not a bridge, but they lead to no bridge.

These general curriculum courses need to be replaced in their entirety by work-related courses; by a curriculum which connects directly to cooperative education activities.

Cornell University's Stephen F. Hamilton puts the matter in stark terms:

> "I am concerned with the way in which young people become adults. In policy terms, a critical issue regarding the transition from youth to adulthood can be stated as a question:
>
> "What institutions support the transition

from school to career?

"High overall rates of youth unemployment (in 1985, white teenagers 15.9%; black teenagers 41.6%) mask a phenomenon that operates very differently among different groups of youth: those who experience a 'floundering' period between the end of full-time schooling and entry into a career; and those who fail to establish more than marginal involvement in the labor market and become as young adults the 'hard core' unemployed.

"The youth labor market is part of the secondary labor market, which is defined by jobs offering low pay, minimal benefits, little security, and no advancement opportunities. Women and minorities are clustered in the secondary labor market along with youth, in such low-skill jobs as custodial work, food service, and retail sales.

"For youth, the absence of training and advancement opportunities are the most critical features of the secondary labor market."

>>>

Hamilton's question is key: What institutions do support the transition from school to career?

I would argue that cooperative education is that institution because it combines the three essential elements:

The employer

The employee

The schooling

Yet, at most, only some ten percent (10%) of students in US secondary schools not preparing for college are in a coop ed program. That leaves 90 percent (90%) of 3/4 of all 16-20 year olds without transition support.

How they get to the bridge, and how they get over the bridge, apparently, is "nobody's" business.

About a year ago, the Committee for Economic Development made a dramatic recommendation -- one which if heeded by schools and employers would change the way more than 5 million teenagers a year are educated.

They wrote:

> "We recommend that schools work with local businesses to design and implement better work-study and/or cooperative education programs, and that state and local governments assign these programs a high priority in policy and financing decisions.
>
> "...high school vocational education programs that do not teach specific job skills have not been successful either in terms of providing good remedial education or adequate employability skills and do not provide necessary compensatory education.
>
> "Many low-achieving students and dropouts never learn the basic skills and work-related behaviors that are necessary for success on the

job. As a consequence, these youths have fewer opportunities for employment, and even if employed, they are less productive and adaptable.

"We urge schools to improve the school-to-work transition by making greater use of programs that provide outside work experience related to classroom learning.

"We encourage a careful expansion of cooperative education and similar programs, particularly in schools where they do not now exist, combined with a more thorough analysis of the program's outcome. We also recommend that business participate in such efforts."

>>>

Note the word "transition" in the fourth paragraph. This would appear to be the key difference between coop ed, and traditional vocational schooling. As the CED recommendation notes, voc ed programs don't meet the needs of students with learning problems, nor are they able to simulate employability skills in a shop setting.

The student who coops in a retail store learns initially not only how to do the simplest tasks, but what is expected of an employee in terms of taking and giving orders, promptness, listening, explaining, completing tasks, asking for and giving help, etc.

And if the employer is serious about his part of the bargain, the student will discover that what he does in his

courses is important to his employer; also that the course instructor expects to evaluate not only the student's comprehension of his class work, but his on-the-job learning as well.

According to the best available statistics (and absolutely no one in education research believes that coop ed/voc ed statistics are reliable or accurate), the first high school coop ed courses began about 75 years ago.

I interviewed a retired teacher (Ina Barnes, Chester, Vermont) about her coop ed program when she was a high school student during World War I.

Ms. Barnes explained that she took the regular high school curriculum for grades 9 and 10 (including Latin, English, chemistry, history, and algebra), and then in grades 11 and 12 did practice teaching as a teacher's aide four days a week, and studied child psychology, curriculum development, and related teacher-training courses on Fridays with one high school teacher (she thinks it was the Latin teacher), and a small group of other high school girls like herself.

When she completed high school, she taught full time handling a one-room school by herself, but with frequent (she thinks once-a-week) supervision from a state-appointed supervising teacher. In this way, she earned her teaching certificate.

Since she taught in the same community where she went to high school, she explains that she frequently talked over teaching problems with the former Latin teacher, whom today would be called a coop coordinator.

{Quite incidentally, in 1926, she was the teacher in the one-room school which is now my home.}

The bridge for Ina Barnes from full-time schooling to full-time teaching worked; today's Ina Barnes cross that bridge four or five years later. And, as school reform recommendations have poured forth, the demand is for the bridge to last for teachers at least another two years after earning either a Bachelors or a Masters degree.

Like Ina Barnes, supervision, evaluation, and mentoring should continue for all today's novice teachers.

What is interesting is that almost every other career occupation except teaching has a long exit ramp from the college bridge; first-year employees are generally considered to be trainees whether in a law office, department store, bank, manufacturing plant, accounting office, etc.

A similarly long exit ramp greets high school graduates at the start of their business careers. Yet studies indicate that without coop ed -- without a period of work in an actual business setting -- employers are reluctant to hire and train those under 20, and most defer to those over 25.

Further studies indicate that a long period of non-productive work experience for either the dropout or the school completer is too often fatal, and many of these youth become a "hard-core-unemployed" statistic.

This is the time Stephen Hamilton refers to as "floundering." An excellent description; but let it not mask how descructive that period is.

We're talking here about millions of young men and women under 25 years of age who may or may not have earned a high school degree, but who have minimal academic skills (many of whom are functionally illiterate) and who have never held a full-time job, hence have not learned basic work-related skills.

More than "flounderers" they are social dynamite.

Further, they tend to blow up or ignore all 'specially-constructed bridges designed to provide them what they missed as youngsters.

And these "bridges" are expensive. So are the "hard-core" unemployed. There not only is the general cost to the economy in the loss of productivity, but out of this population tend to come heavy users of social service funds and agencies; also those who burden the courts and incarcaration facilities.

Clearly, it behooves "we the people" to erect the coop ed bridge for as many students as possible.

As Table 1 indicates (See Page 17), coop ed enrollments are on the rise, and reflect even over a short three-year period changes in the business economy.

This flexibilty in the marketplace is one of coop ed's enormous strengths over traditional voc ed. Vocational ed teachers and shops are built in, can't be rearranged quickly, nor can voc ed teachers receive training at a rapid enough rate to cover market and business fluctuations.

For example, the dairy farmer who now teaches animal husbandry in a large Wisconsin vocational school program,

probably is not qualified to teach students plant care for work in a nursery catering to and servicing area businesses and restaurants.

But dairy-herd buyouts remove one career choice for the next year's student class, and openings at nurseries expand. For the 15, 16, or 17 year old, the change may be of only passing annoyance or disappointment; for the vocational school, without a coop ed program, the change is catastrophic.

For the school with a coop ed program, and with teachers who know how to integrate job skills with academic supports, the transition can be made as quickly as the market for new hires fluctuates.

Table 2 (See Page 18) tries to show the huge discrepancy between numbers of students studying traditional vocational subjects, and the small minority in coop ed vocational classes for the school year 1979-1980.

And Table 3 (See Page 19) shows the dramatic change in coop ed enrollments in growth occupations in just three years. While the retail sales area maintains first place through the three-year period, business occupations move from 3rd place to 2nd. Agriculture, because of the high rise in agri business and nursery catering activities, moves from 6th place to 4th.

And technical occupations, which were last (8th), move up to 6th place, reflecting computer-related business.

>>>

TRADITIONAL VOCATIONAL CLASSES DON'T MAKE A BRIDGE

Let's return to Mary, our college-and-career-bound basketball player, who cooped in two retail stores, finally deciding on a sports store for her career.

First, in many secondary schools, Mary would have had to choose either a college-bound or a vocational curriculum path. She could not have combined the two. Many secondary schools do not permit cross registration between these two tracks or streams, hence Mary could not have taken both bookkeeping and algebra.

Second, if she had just had vocational classes in retailing, she would have only studied theory.

Third, there would have been no seminar where she could attempt to link theory with practice; no possibility for her to think through with teachers and employers and fellow student/workers just what the relationship was between current economic conditions and retail marketing strategy as practiced by her current employer.

Fourth, Mary could have been taught in vocational classes by teachers who probably were former retail employees how to dress for a job, how to greet customers, how to treat a supervisor, how to write up a sales, how to make an exchange, how to locate a "lost" item, etc.

But all in a generic sense; not within the context of an actual store setting with specific conditions, particular customers, and individual supervisors.

Even such a skill as typing, if confined solely to a vocational classroom setting, never gets far beyond memory/dexterity. Once the keyboard is learned (for typewriters and/or word processors), the logical next step is the preparation of material using the typing skill.

In vocational classes, teachers who generally have used their own skills in a business setting, do what they can to simulate a job site for their pupils. And the texts the students use give them "pretend" letters and business forms and reports, etc. on which to test their skills.

Some teachers actually get assignments from local business people, have their students complete the work for the business under the teacher's supervision, then return the completed material for signature or distribution. They do this because, as vocational teachers will explain, the need is for the students to get as close as possible to knowing the conditions of an actual business office.

And as graduated business students quickly learn, each office has its own special ways of handling typed materials. Each has its own equipment; its own customs; its own style. And each employee needs to learn where he fits in the flow of typed materials.

We don't know, of course, whether Mary stayed with her sport store as a sales clerk, or whether she decided while at college to go into management.

We don't know whether Mary stayed with the store in which she had done her coop work; whether she moved to a sports department in a department store; became the owner of her own store or franchise...

We don't even know whether Mary chose a coop program at her college.

But what we do know is that Mary got actual experience in an actual store dealing with actual customers, inventory, supervisors, fellow employees, and sales-related equipment. We know that Mary learned what it means to be punctual, courteous, thorough, sincere, honest, responsible, clean in body and language, a good listener, a clear communicator, etc.

We also can imagine how supportive the sports store employees and supervisors were of Mary's basketball prowess; and also how supportive were her coaches and fellow basketball team players of her 12th grade sports store coop work.

Such interaction between employers and school personnel, is, of course, not possible with a traditional vocational class program where there is no employer -- no work site.

Mary learned what it was to be evaluated and graded by an employer/supervisor. Again, an all-important lesson impossible to learn outside an actual job site.

Fifth, and perhaps the most striking difference for students between "just" taking vocational classes and cooping

in a real job is the ethos or ambience of the traditional vocational shop.

I've visited scores of vocational classes and shops from coast to coast. The better of them, have simulated actual work sites with clocks to punch, supervisors to obey, uniforms to wear, report forms to fill out, daily assessments of work accomplished, and so forth.

The majority of them, though, because they are not production oriented and do not have to deal with a "real bottom line," ooze a kind of laissez faire. Behaviors which would never be tolerated in a "real" garage or construction site or in a small engine repair shop or by an electrical contractor or plumber or business manager abound. Wasted time; wasted motion; wasted materials -- these, too, abound.

Sixth, is the serious equipment problem. How to keep the school's vocational shops and classrooms filled with up-to-date equipment? Similarly, the up-to-date textbook problem.

Most vocational schools and departments are dependent upon local businesses to provide them with costly equipment so they can train students in their use; yet local businesses generally provide the schools, not with the latest equipment, but with out-dated materials which become redundant when the business replaces them with more up-to-date equipment.

{As an aside, I took "Vocational Typing" in the Galway Union Free School in 1940, and prepared for the New York State Regent's Typing Examination. We spent the first half of the year not only learning the keyboard, but practicing

the writing of business letters as then generally set up in local business offices. We spent the second half of the year studying business forms and styles as they would appear in the Regent's examination, forms and styles no longer in use in those offices for which we were being prepared to find a job. Confession: I failed the Regent's Exam the first time by typing only 24 words a minute with 25 wpm the passing standard. The same June I passed geometry with a 76, with 75 the passing grade.}

Seventh, is the up-to-date teacher problem. If the vocational instructor has not been plying his/her trade in an actual work site for several years, even the teacher may be out of date. My fellow students in my typing class who went on to get office jobs, for example, were grateful for the fact that their instructor had kept up with office styles, even though the Regents' examiners were behind the times.

Mary's career choice, retailing, has long been the mainstay of coop ed programs in vocational education. Such a course is generally called "Distributive Education," and vocational teachers in this program are adamant that there is only so much they can teach in the classroom; that actual store experience is essential.

And most would applaud the fact that Mary had a variety of sales clerk experiences while still a student, and could have the advantage of talking out problems and challenges and interests with sympathetic and understanding teachers.

Mary's teachers knew she could only learn so much about

sales work from them; that actual store experience was necessary for up-to-date retail experience.

>>>

If traditional vocational/technical education is not a bridge, what is it?

It's skill training.

Voc/tech ed can't teach work attitudes or work skills; these require an on-the-job learning environment.

But voc/tech ed can teach singular skills.

Use, for example, of an acetylene torch; or a computer keyboard; or a pneumatic drill; or an oscilloscope; or a microwave oven; or a pressure gauge; or a sewing machine.

For vocational education to be a bridge, there needs to be both skill training and practice of that skill under guidance and supervision. The student who learns how to wield an acetylene torch isn't ready to hire out as a welder.

The welding student needs, first, to perform as an intern, as a novice worker, as an aide, as a coop. The student needs to know how his/her newly-learned skill fits into a job assignment.

All of which means that some sort of transition stage is essential for students between full-time jobs and full-time schooling. And that transition (or connecter) can be coop ed; that time when a student is expected to fill a job slot, but does so with overseeing help not only from school officials but from cooperating employers and supervisors.

>>>

THE BRIDGE BUILDERS

Making all of vocational education cooperative will not be easy. The bridge builders (school authorities and employers) must work together, and to dramatize why this need for cooperation is part of the problem and not part of the solution, we need only turn to the the example of schools as employers.

Work-study funds, when they have been handed to the schools, have been almost universally used to buy cheap youth labor outside coop ed programs. That is, when given an opportunity to hire a student to work in the school's accounting office, choice of student has not been made on the basis of the student's career choice, but on some other basis, thus relieving the employer (the school) of having to monitor and evaluate the student's work experience.

Furthermore there are many school-related jobs which could be held by youth, but schools, typical of outside employers, shun the under-25 set, and hire, instead, older adults, particularly in support-personnel positions.

Nevertheless, an estimated 3/4 million businesses do hire coop ed high school students; 3/4 million business men and women do work in tandem with some 100,000 educators to build coop ed bridges.

The need, though is for some 10 million high school

students to alternate periods of time spent in supervised jobs with supervised academics. This means there need to be 10 million cooperating business men and women working with 1.3 million educators.

And this means that schools have to play both parts; they must hire their own (or their neighbor's) coop ed students. As good employers they must be good guides, mentors, teachers, evaluators, disciplinarians, counselors, and bosses.

At the same time, the school as "boss" must expect the school as school to prepare the high schoolers well; to teach them basic work habits, and basic work skills.

Let's take a look at Table 4. Here we get a listing of the 10 largest civilian occupations in 1970, for men and women. Interestingly, many of these occupations fit into the personnel needs of a school system.

Also, of these "top 10," most can be found within rural, suburban, and urban areas, meaning that even in rural and suburban areas of the country coop ed students can find sufficient job sites.

Also interesting to note is the fact that only the category of "sales workers" is common to both men and women.

TABLE 4

TEN LARGEST OCCUPATIONS IN RANK ORDER FOR FEMALES IN 1970

Secretaries (not medical or legal)

Sales workers

Bookkeepers

Elementary school teachers

Waitresses

Typists

Sewers and stitchers

Registered nurses

Maids/servants in private households

Clerical workers

>>>

TEN LARGEST OCCUPATIONS IN RANK ORDER FOR MALES IN 1970

Managers and administrators

Sales workers

Foremen

Truck drivers

Farmers, owners and tenants

Janitors and sextons

Carpenters

Automobile mechanics

Machine operators

Farm laborers, wage workers

Source: Information Series #304, NIE, 1985 from Sommers 1979

What's most important about these "top 10" occupations for bridge building and coop ed is the fact that both the academic and job-skill demands for them are well within the abilities of high school students, high school curriculum developers, and work-site supervisors.

Even if we consider "fastest growing occupations" projected up to 1995, by the U.S. Bureau of Labor Statistics, the tasks and the training are well within high school ability.

Fastest growth based on number of jobs created:

Building custodians

Cashiers

Secretaries

General office clerks

Sales clerks

And fastest gowth based on percentage increase of newly created jobs:

Computer service technicians

Legal assistants

Computer systems analysts

Computer programmers

Computer operators

>>>

Clearly, the place to learn basic skills in jobs requiring some computer expertise is on the job. For schools to attempt to have for student use every which type of computer key board, computer program, and computer access is cost-prohibitive.

At the same time, keyboard skill -- which can be taught without a computer -- is a basic any business would expect a coop student to have before asking to be hired.

An understanding of what computers do and why; and basic care of the equipment is, of course, something schools can and should teach.

But the youngster who earns a coop job in an office with desk-top computers tied to a main frame on which he/she is asked to enter data of a specific type in a specific way, obviously needs to learn these specifics on the job.

Just as the coop student sales clerk needs to learn the merchandise in his/her store, and what his/her boss expects of each clerk.

In March 1986, a conference dealing with technology and vocational education was convened by the Southern Growth Policies board. Harry W. LeColst, vice-president of LTV Aerospace Industries, addressed the problem of voc ed and technological advances. The following is an excerpt from his talk:

> "The management of our vocational education system also needs to be enhanced. Not long ago, I visited a vocational school that was set up as an example to the rest of the country. Yet, just a few years later when I toured that school, I observed out-dated equipment and lethargic mangement. The basic facility was in place, but it was not up-to-date.
>
> "Instructors told me as I toured the school,

which enrolled some four thousand students, that they felt discouraged because their facility was not given adequate support. They thought their students were being shortchanged, not only in the vocational or the technical area, but also in the academic area.

"If we are going to compete worldwide in industry, we cannot be lethargic. We must be creative.

"We must increase our productivity.

"Industry provides the basis for economic growth. In our plant most of our equipment is computerized, micro-processor programmable, or numerical-controlled. We have difficulty finding people who even understand those words.

"Recently, when we acquired a Wang word-processor, no one in our high schools understood or could use that equipment. Nowhere in the area (Camden, Arkansas) could we find people who knew what it was or had any experience with that particular equipment."

>>>

There it is, from a coop ed employer. Mr. LeColst illustrates two vital canons of coop ed:

(1) the schools must know about and teach about modern technology; and

(2) the job sites should be prepared to teach basic

skills on new equipment.

I want to try an analogy to explain just how it is employers and school authorities and students can work together to erect the bridge between full-time schooling and full-time employment.

Students who go out for a part in a school play or compete for one of the backstage jobs, must alternate time in their regular school classes with time spent studying a part or readying the stage.

If the school is doing its part, each student studies literature and drama and the meanings of stage directions in academic classes. Further, academic teachers teach play reading as well as play writing, as well as direct students to read and study some of the finest drama productions ever staged.

History teachers teach research skills, as do all science teachers, so that the budding actors, playwrites, and stagehands know how to dig out background and relevant facts.

The drama coach acts much as a coop ed coordinator does. He/she integrates the actual production skills with the academic teaching, urging the students to make their own connections.

Hours and hours are spent honing stage skills -- no matter whether the student is building a stage set, handling one of the spotlights, or speaking one of the parts.

Participating in a drama production or a competitive athletic game as well as playing in a school orchestra, are all akin to coop ed.

The final production of the play is "for real." A real audience made up of interested relatives and community members. The actual playing of a game is "for real." As, of course, is music performed for an audience by the band or orchestra. In all cases, the course work underpins the productions.

And so it is with cooperative education. The bank supervisor is the drama coach; the head sales clerk is the athletic coach; the office manager is the orchestra director.

Those who fault vocational education for not teaching "employability skills" and hold schools in some sort of low esteem because such skills are better learned on the job than in the classroom or shop, fly in the face of all obvious school experience with their criticisms.

Of course employability skills are best learned on the job. One learns best how to play a violin in an orchestra by playing in an orchestra, not in a practice room or during a teaching session with an instructor. Although without those hours of practice and drill, one could not play with the orchestra.

One doesn't learn how to play a good game of soccer until he/she plays a game of soccer; and one can't play a good game of soccer if he/she hasn't practiced the skills under the guidance of a good soccer coach.

And just as one won't become a professional actor just by acting in one school production, so one won't become a professional banker just by cooping in a local bank.

But one will learn more about banking by cooping in a bank than by mowing lawns; and one will learn more about custodial responsibilities by cooping with a janitor than by making beds weekends for a local motel.

There are many coop ed models. One favored by employers keeps a job slot filled by alternating coop ed students. The school may handle this by having students spend one marking period (say 6 weeks) full time on a job, and the next marking period in class.

Each student is "paired," so that the employer has the slot filled first with Coop A; next with Coop B.

Another system is for students to spend part of each day in school and part at a job; the employer in this case could have a single slot filled by a "pair" of students, or use the coop hire for "busy" times.

In 1972/1973, while I was with the Experimental Schools Program in the National Institute of Education, I organized a competition for five of the poorest school districts in five states. A grant was given to each school district to offer 20 potential 15-year old dropouts an opportunity to spend an entire marking period at a job site.

An immediate first "problem" was the fact that the guidance counselors in the five districts -- even though less than 50 percent of the seniors went on to post-secondary institutions -- had never made any contacts with the business community, and did not know how to find 20 jobs for 20 unskilled students.

A second "problem" was the fact that when I suggested

they put together a committee of parents, recent graduates, and local business people to help locate 20 job sites, the guidance counselors in each of the five districts did not know which former students were holding down jobs in the community.

A third "problem" was an overwhelming desire on the part of the school administration to give this job opportunity to "better" students, and not to their potential dropouts.

A fourth "problem" was the fact that these 20 students -- all with high truancy records -- had been given no training whatever in interviewing skills, proper diction, appropriate language and dress, personal hygiene, simple housekeeping, budgeting, or household finances.

They had taken basic math, but not been taught how to handle personal finances. They had taken special English classes, but not been given training in public speaking. They had taken required health classes, but not been taught personal hygiene appropriate for work sites.

Classes and courses were hastily develloped; job sites were found; 20 academically-weak 15-year olds were recruited; and the experiment proceeded.

The failure rate was 5%. One of each of the 20 failed to hold the job for the full marking period. Nineteen not only held their jobs, but were guaranteed re-placement by their temporary employers if and only if they returned with their earned high school diplomas.

One hundred students in one marking period...like one swallow does not a success make.

But this story is an old, old story.

Ina Barnes, who cooped to be an elementary school teacher in 1917, tutors today, 70 years later, at the elementary school down the street from the senior housing project in which she lives.

Paul Barton in a Paper for "Youth and America's Future"

> "Cooperative education remains a limited form of vocational education, relegated heavily to retail trade although found to a limited degree in almost all skill areas. It is obviously not the preferred approach by vocational educators; it requires the extra effort to involve the employers.
>
> "It is the involvement of these employers that recommends the approach over strictly classrom efforts. The leading educators in vocational education, Rupert Evans and Edwin Herr, state that 'studies of the economics of cooperative education have shown higher rates of return on investment than in other types of programs.'
>
> "The analysis of Adele Harrell and Philip Wirtz, using the data from the National Longitudinal Study, show that the more hours students worked in their senior year of high school, the lower their unemployment rates four and a half years after leaving high school (12 percent for those who worked not at all, diminishing to 6

percent for those who worked the most, a finding that holds irrespective of race or sex).

"The advantages are:

1. Learning occupational skills is aided by real experience.
2. The school and employer must work together, identifying weaknesses and remedying them before graduation.
3. Joint work-study programs provide a job connection after graduation.
4. The market test is applied all the time; employers will not participate in imparting skills for which there is no demand.
5. Cooperative style education reduces the problem of keeping up-to-date equipment in the classroom.
6. In general, such arrangements force schools and employers to talk to each other."

>>>

WORK/STUDY * EXPERIENTIAL EDUCATION * COOP ED

Among those who run schools and who make school policy, there is a serious and fundamental difference of opinion. On the one hand are those who feel that the 12 years of schooling is short enough; hence every moment should be spent honing the basic academic subjects.

And on the other hand are those who want students as early as possible in their schooling to have out-of-school and work experiences.

Of course, those who support secondary-school level cooperative education fit into the second group; although they generally favor starting coop ed programs at grade 11.

But not all those who believe in exposing high schoolers to what is sometimes called "the world of work," agree that coop ed is best or even good for this age group.

Further there is a split between those who believe that what's needed at this age group is "exposure" to work and careers; and those who believe that a specific job and narrow skill training provides the best transition from full-time schooling to full-time employment.

Then, too, a great many vocationally-interested educators can be split among those who say what's needed is

the teaching of good work attitudes, and that it's not only not necessary, but unnecessarily restricting, to place such young students in occupationally-specific jobs.

Those educators would prefer work/study and experiential education experiences; would prefer a selection of short-term work experiences; would have students study a selection of different careers including an opportunity to talk with leaders in several different occupations. They would not want a student to coop for grades 11 and 12 in a single work site.

And often, when this group argues against coop ed programs, they throw up as a buttress the fact that many high school coop students are given minimal on-the-job training in dead-end jobs. For example: the coop business student who never progresses past the data-entry department in an insurance company, where the task is merely to enter data from a card into the computer.

Another: The student go-fer for a construction company who carries and fetches. Another: The student who never progresses from stocking shelves in the appliance department of a multi-purpose department store.

Table 8 (next page) could be used both to support the position that all high schooling should be academic, and, conversely, to support those who favor some vocational training along with the academics.

What would be marvelous to know is what percent of these top business executives managing U.S. companies had some form of coop ed along the way in high school, a post-

secondary school, college, or graduate school. But we don't know that.

TABLE 8

U.S. BUSINESS MANAGERS AND EDUCATION ATTAINMENT IN 1980

IN THE 25 - 34 AGE GROUP

Percent of Managers	Education Attainment
25*	No more than a high school diploma
25	One to three years of college
30	A College degree
20	At least five years of college

* 50% of all U.S. chief executives in 1980, (not restricted to the 25-34-year-old-cohort) had no more than a high school diploma.

Source: Sue E. Berryman, National Center on Education & Employment; 1980 Census.

>>>

You're the superintendent of schools in a large city school system and in favor of an all-academic secondary school program, so you put this chart (leave out the * about the 50 percent of all managers) on an overhead projector for your school board to show them that what your students need is a strong academic backing so that they can take leadership positions if needed; or if college is their choice, see that they are prepared to go as far as possible.

You point out what the chart demonstrates: That 3/4 of

all who achieve management positions are, of course, college educated.

No, you're the superintendent in a large city school system, and you want all of your vocational education students to enroll in a coop ed program.

You point out that there is obviously a very weak or possibly no relationship between the current use of vocational classes by many college-bound to take an "easy" credit course, or to think maybe a skill course will help them get a part-time job.

You leave in the * about 50% of all management level employees in all U.S. businesses possessing no more than a high school diploma, and you argue that forcing students to wait to coop at the college level would "cripple" the opportunities for serious career advancement for as many as one out of every two students.

Then you go on to posit that undoubtedly these "no-more-than-a-high-school-diploma" managers must either have had the advantage of connecting their academics with a work experience through coop ed while still in high school, or learned to make this essential connection by some other privately-gained comparable "bridge."

Of course, just making it possible for a career-bound student to alternate periods of time in the classroom with periods of time in a job is not what true coop ed strives to do.

Student coops find it enormously important to meet with

coop ed counselors (coordinators) to reveiw and think through what's taking place.

And generally these sessions are run as workshops or seminars. Generally the effort is to achieve some sort of Socratic dialog...to explore meanings behind common happenings. One session, for example might focus on management styles, and what each coop is learning about management from the styles he observes at his work site.

A follow-up session might focus on relationships among employees, and how one employer may seem to be more supportive than another. Perhaps the next topic is "process." Another might delve into personnel issues; another on wage and compensation differentials.

Dress, deportment, reporting mechanisims, handling of absenteeism, shoplifting, vandalism, body language...the list of topics for those who organize these workshops come out not only of general need, but specifics.

And what may be a dead-end task, perhaps, for one student, can be placed in such a perspective that at least good work habits are learned and enough information shared by those working in other occupations, that the learning for that student is larger than the training.

Theresa Howard, director of the cooperative education program at Holyoke Community (two-year) College in Massachusetts, holds regular seminars for 15 students at a time, often including one or more faculty-member coop coordinators, to make sure that coop ed is a true bridge.

She helps, as well, with a collaboration among 31 area secondary schools, aiding them to make sure that their coop ed programs are as strong and job-satisfying as possible. And she has helped the high schools develop similar 15-student seminars to be sure that the skill and attitude connections which need to be made are actually being made.

Marion R. Craft, Department of Education program specialist, has summarized a report from the Center for Public Resources regarding the fact that the workforce in the U.S. is moving "from one concentrated in manufacturing and industrial processes to one providing services, technology, and information."

A study done by the Center found that 75% of the school respondents felt they were giving their students "adequate" skills preparation. The majority of businesses responded that they found their workers deficient in basic skills.

The school personnel cited "reading skills" as the most deficient; businesses cited speaking, listening, mathematics, and scientific skills as key areas lacking proficiency.

To quote from Ms. Craft's unpublished annual report on cooperative education for 1986:

"In all job categories, even low-skilled ones, both businesses and unions noted widespread inadequacies in science knowledge noting that such knowledge is important for most jobs, even in offices and factories." Then she states:

On the other hand she observed, "Educators placed little importance or value on scientific knowledge in the

workplace."

THOSE DEFICIENCIES:

SPEAKING

LISTENING

MATHEMATICS

SCIENCE

Traditional didactic teaching methods -- so prevalent throughout U.S. secondary schools -- are poor preparation for coop ed students. Little chance in those classes to speak; little opportunity to listen to several voices or to several opinions.

Also, the traditional assumption that students should do the high majority of all class and home work alone, without consultation with fellow students, is particularly poor preparation for work assignments where collaboration and cooperation are essential for success.

Also, most schools continue to keep separate the various subject areas, as though math and science were so different that they require not only different texts and different course times, but in many cases different instructors.

Or that English composition is somehow a different experience when applied by an English teacher than by a math or science teacher. Furthermore, students perceived as "college material" are often provided with compostion

instruction which is denied to those identified as on the "vocational" track.

True, there may be much in the college-prep composition class which is irrelevant to the student uninterested in a career leading to an occupation as a secondary school English teacher of college-prep composion.

But true, too, is the fact that in many schools it is only in such classes that the studying and reciting of poetry takes place. Or, that it is only from these classes that students are culled to read (possibly write), and perform one-act plays.

Possibly business employers and union officials would not be so quick to condemn the poor speaking and listening skills of work-study students if these students had been enjoying a school program based on the Socratic teaching method, and integrated course work.

They would be delighted to know that all coop ed students, during their off-job school times, were performing in plays, doing collaborative scientific experiments, making oral and written presentations along mega historic themes, and using performing skills for community service projects.

The present "guestimate" is that about 50 percent of those who coop stay within their coop occupation career path for "permanent" job selection.

That is, half the coop students who work during school years in a gas station choose to work in a gas station or automotive repair shop when they finish school. Those who

coop in a restaurant, seek full-time employment in food service. Even the student who coops in the accounting department of a hospital (rather than an insurance office), may seek an accounting job in a "like" setting after graduation.

Hence it is important that schools provide opportunities for students to do voluntary community service, and provide opportunities for observation of and discussion about a wide variety of occupational skills.

The Winter 1987 issue of the Public/Private Ventures Newsletter features -- interestingly -- a project they have named BRIDGE.

> "P/PV named its newest demonstration BRIDGE to signal the fact that it spans the threatening shoals of 9th and 10th grade for dropout-prone 8th graders who might not make it through early years of high school without help.
>
> "In addition to regular classes, participants attend a special BRIDGE class at least five periods a week for three semesters, and get academic credit for attending.
>
> "The BRIDGE class offers instruction in job-related skills, life skills and study skills, and connects all of this with the academic skills taught in other classes.
>
> "BRIDGE youth are also offered help with personal and family problems by BRIDGE staff and

community volunteers, a combination of work and education during two summers, and a place in their school's existing school-to-work transition program (coop ed) in the 11th grade.

"BRIDGE students enter the program in the middle of the 9th grade...scoring at least two grades behind their peers in reading or math.

"The special class for BRIDGE students is the centerpiece of the program. It occupies the equivalent of at least one day of each school week and continues through the summer to combine a wide variety of instruction, activities, classroom and field work. In design and subject content, all the components reinforce basic reading, writing and math skills taught in other classes and develop the capacity to reason, question and think things out.

"The job skills component includes career exploration, preparation for job interviews, instruction in proper on-the-job behavior and exposure to real work situations. Field trips to work places and speakers from local businesses are on the agenda."

>>>

I think that one of the most enormous strengths of a good coop ed program is the fact that a student stays long enough in one skill setting to be able to apply both general and specific knowledge to the work experience.

That is, by staying with one set of skill needs under close supervision and buttressed by compatible academic courses, the student has the right foundation to use the bridge.

But I'm going to argue that there's a time for "exploring the world of work" -- before grade 11. And a time for learning what it means to work -- beginning at grade 11.

There's also a need for each student to have one person who supervises him/her long enough and consistently enough to be able to provide some genuine leadership.

The high school student, particularly, needs to have some consistency in perception and guidance. He/she gets it at the school if the school is conscientious and has a well-trained and not over-subscribed coop ed coordinator.

But work sites which place coop students first in one office then another, shifting training and supervison requirements ever on to another full-time employer, neither provide themselves a strong worker, nor provide the student with the work experience he/she needs to become competent.

A New York City secondary school offers a one-day-a-week coop experience for selected students. They are bused that one day a week (Thursday) to a large city hospital.

The supervisor I spoke with is an accountant at the hospital. Every year she gets another coop student with whom she works, and organizes her activities so she can give the student on that one day a week tasks which not only are doable, but meaningful.

She expects to not only be teacher and boss, but

evaluator. She expects the coop ed coordinator to discuss the student's abilities and interests with her, and that jointly they would grade the coop ed time.

She also expects that the accounting teacher at the high school will be interested in what she has the student do at the hospital every Thursday, and expects the academic classwork assignments to underpin the accounting principles she's insisting the student use as her employee.

She explains: "Of course, some of the kids are better than others (she's been working with coop ed students from this high school for more than 20 years), but I am impressed with the teaching they get, and with their progress on the job after the first five or six weeks.

"The change is radical."

Then she added, "A couple of times, that change didn't occur, and before I could suggest that that particular student seemed misplaced, the student would be displaced."

When I asked whether or not each new student had to be "broken in" over a longish period, she explained that no one came to coop who hadn't first come to the hospital as a volunteer. And, yes she thought that that familiarity with the institution was a foundation of the success of the coop program.

In 1976, John Henry Martin directed a national panel on "High School and Adolescent Education." The report argued that "...with a few notable exceptions, the vocational shop courses in both comprehensive high schools and vocational

centers fail in their stated objectives."

Further, the panel strongly endorsed work-study and cooperative education programs. Also insisted that all vocational programs be directed jointly by "business, industry, and union representatives, as well as teachers and students."

It's the involvement of students in the decision-making about what students should study and where and for whom they should work which repeatedly has been recommended, and almost universally ignored.

Yet there's enormous evidence that involving students early in career decisions promotes maturity; excites curiosity; helps to initiate skill acquisition.

Anyone who has ever had to teach a teenager to drive can tell you that without the student's interest in this endeavor, little progress is made. But that's the rare occasion. More normal is the example of what concentration of interest can do to drive skill levels upward when the taking of a driving test is anticiptated by a teenager more than a little eager to pass "on the first try."

Let me close this section by describing what might be "typical" schooling for a student wanting to coop the last two years of high school. For convenience, we'll make him a Jim.

Jim begins learning about work in school by having a daily chore. In the primary grades, these chores may have to do with cleaning and some clerking duties.

Jim's primers have stories about people doing jobs; and

Jim may help write stories about work and workers.

Jim will play some work simulation games in the primary grades, learn to handle money in retail and marketing situations, even interview employers and employees to learn what it is they do and why.

This exploration of work and jobs and economics and business continues on through the elementary grades. Jim continues to do a chore a day in school, and also particpates in community service projects such as visiting a local nursing home, helping with green-up days, adopting a grandparent, being a big brother, helping collect funds and do chores to earn money to support local community projects.

When Jim gets far enough along in school, he is encouraged by his teachers to take out-of-school jobs, and to use what he learns doing the jobs to contribute to class discussions about careers and good work habits.

And as soon as Jim gets to high school and his parents signal that Jim is interested in cooping when he's in grade 11, a big brother coop student is found for him.

Also, Jim is encouraged to do research on occupation areas he's interested in.

And the coop ed counselor or coordinator begins holding seminar discussions about the integration of course work and job assignments -- seminars Jim attends. In these, Jim gets to hear from business men and women, recent graduates who cooped a year or so before, and from academic teachers.

Jim's English teacher accepts a paper from Jim about

what he learned observing a bank clerk for five afternoons in a row.

Jim's math teacher, learning that the school district wanted to turn the line-item budget into a program budget, has all the students in three of his classes begin work on the previous year's budget; this sent Jim and his partner working on program costs for the intra-mural athletic program to interview some of the coaches, and then interview two of the school district's bookkeepers.

Jim's history teacher, learning that Jim was hoping to coop in a union shop, helped him research the early days of the union movement, and helped Jim and three others work on a video program about union concerns shot at one of the local businesses during after-school hours.

In the 10th grade, Jim signed up to go spend a day with each of three upper class coop ed students: one in a bank, one in a lawyer's office; and one on a construction site.

Then he signed up for counseling from one of the coop ed coordinators.

And finally, he started the final interviews and the contract-writing period at the close of the 10th grade. He's been able to get a summer job with a construction company, and so he just had to decide between working in a law office or working in a bank.

What he decides is to offer to do voluntary service for the local courthouse clerk, and that way hope to get more of a handle on a career in law; and to do his coop ed program at the one bank in town where his parents don't have an account.

This "Jim" has made excellent use of experiential education and work/study opportunities. This "Jim" also has attended a remarkable school: a school where learning is not divided into so-called disciplines, but is integrated, giving him an opportunity to reason, conceptualize, analyze, solve problems, and express himself verbally and mathematically with both precision and grace.

His bank job employers expect him to have learned these skills in school; his bank employers don't want him to think that math is one subject and writing about it is another. His bank employers want him to integrate the use of numerical references with communication skills.

And they expect both pecision and grace.

Jim knows he's just got 20 hours a week on the job; and that in his final two years of school he will have held down the equivalent of only one year of full-time employment.

He'll still be a novice when he finishes high school; but a novice who's crossed the bridge, and prepared to work full time, knowing full well that more schooling and more skill training will follow.

Jim's schooling will have emphasized cooperation instead of competition among and between pupils; he will have worked in several team situations solving problems requiring not only research skills, but practical application of possible correctives; he will have had to communicate new ideas to a variety of audiences using a variety of media; he will not only have learned about commitment, but found it to

be a quality worth measuring by teachers and school administrators.

And if Jim's school did its job properly, even though Jim cooped his final two years, he will have the same choice as any other high school graduate: college full time or a full-time job or part-time at both.

In other words, the coop ed bridge will have lived up to its definition: "a thing that provides connection, contact, or transition."

>>>

FINANCING COOP ED

It would be pertinent to enter here statistics about the costs of coop ed; particularly in comparison with the costs of traditional vocational programs. But when coop ed authorities were asked about costs, I received the following answers:

* "Not available."

* "Don't know of any reports on this which are statistically reliable."

* "Have no idea where you could find such data, but I do know that whenever coop ed counselors get together, they all talk about money as their their Number One Problem."

A team of Norwich University finance experts recently completed a study of the cost of high school level vocational education in Vermont. Unfortunately, no effort was made to distinguish costs between classroom and shop vocational training and coop vocational programs.

Vermont, in 1986, enrolled 3,707 students in voc ed in 16 sites; some vocational centers; some vocational areas within a comprehensive high school.

That year the state provided $1,166.41 per/student in special voc ed funds, and local districts provided $1,928.41 per/student to reach a total of $3,094.92.

This total does not reflect capital expenditures, academic expenses, or regular transportation costs. The $3,094.92 per/student is the level of spending for vocational education expenditures over and above regular school spending levels.

While there is almost no hard data available re: coop ed finances, general belief among practitioners is that coop ed costs run slightly less than straight voc/tech ed costs. This is particularly true if equipment costs are included.

It also would be pertinent to provide data about cooperative and vocational funding souces. But here, while there is some data, there is no breakdown for coop ed. And many vocational programs, particularly those in comprehensive high schools, enroll nearly an entire student body in at least one course labelled "vocational."

Table 5 does provide a slight picture for the years 1980, 1981, and 1982 of federal funds earmarked for exclusively for coop ed programs. But there's little data on how the monies were spent, how they were distributed among school districts, or whether they were replacement monies or enrichment monies.

TABLE 5

FEDERAL FUNDS PER HIGH SCHOOL COOP ED STUDENT 1980 * 1981 * 1982

Year	Total	Per/Student
1980	$10,885,092	$18.22*
1981	23,049,772	36.95*
1982	18,445,000	25.27*

Source: National Center for Education Statistics, DE

* 1980: 597,564 coop students
* 1981: 623,741 "
* 1982: 730,038 "

>>>

It's quite possible, though, that coop ed, once initiated, and where students are paired so that half are on the job while the other half are in school, costs no more than one coop counselor for every 40 students.

And with half the vocation-bound population out of school at any one time, this would mean fewer faculty positions, thereby possibly effecting a savings not only in the school budget, but in per/student costs per program.

A further cost reduction -- if one starts with a fully funded vocational shop program -- would come in the reduction of vocational teachers in auto mechanics, building crafts, electrical contracting, etc.

Coop ed students would receive in their related academic math and science classes the basics needed to hold down entry-level jobs in these occupations. What they would not take are shop classes simulating the work of real work sites.

Instead, employers would train students while on the job, and the more competent the academic instructors in curriculum design and development -- as well as in integrating the academics with the work experience -- the better experience the student would have on the job and the more job satisfaction for the employer.

Table 6 attempts to show both how many students there are in vocational programs; and how many of these are in vocational coop ed.

TABLE 6

COOP ED ENROLLMENTS IN RELATION TO TOTAL VOCATIONAL ENROLLMENTS
1970 * 1972 * 1974 * 1976 * 1978 * 1980

Year	Coop Enrollments	Vocational Enrollments
1970	289,915	6,020,609
1972	459,614	7,405,888
1974	605,140	8,930,264
1976	611,480	10,097,094
1978	508,316	10,836,295
1980	597,564	11,763,539*

Source: National Center for Education Statistics, ED

* See Table 2; Page 16.

Figures in Table 6 for total vocational enrollments may not be true counts; possibly include post-secondary, as well as part-time enrollment of regular curriculum students in one or more vocational classes.

>>>

Let us just presume that the total vocational enrollments reflect all full-time secondary level vocational students (and not a wholesale count of every student taking one or more courses designated as "vocational"). And let us presume, as well, that the coop enrollments reflect those students in the total who balance on the job training with vocational classes back at school.

In 10 years, the coop ed enrollments have more than doubled, according to Table 6; while total enrollments, while rising by about 70,000 students annually, don't quite double in the decade 1970-1980.

Even though this chart shows a "bulge" of coop ed students in 1974 and 1976, I can find nothing in the literature about this time; and am assured by those who follow coop ed research, that this may simply be a "reporting" change, and not an actual peaking and drop off.

What the literature generally states is that there has been a steady rise in enrollments in coop ed programs nationwide, growing just a little faster than the steady rise in vocational enrollments.

A word about counseling from "An Assessment of School Supervised Work Education Programs," by Walsh & Bregglo:

"Significant correlations were found between counseling and several success criteria. Students

who received highly rated and effective counseling rated their programs higher, were more likely to recommend programs to friends, and had more positive attitudes toward their programs. These relationships were strongest at the secondary school level, but they also occurred at the post-secondary level.

"The responsibilities of the typical coordinator included:

1) In-school promotion and recruitment
2) Selection of students
3) Preparation of curricula
4) Teaching of cooperative classes
5) Job development and employer relations
6) Referral of students to jobs
7) Inspecting work sites and observation of student performance on the job
8) Counseling of students
9) Grading of students
10) Placement
11) Self-evaluation

"...the actual student-coordinator ratio was 40:1."

>>>

According to Walsh & Bregglo, in 1976, post-secondary male coop ed students in sales and management occupations were paid an average of $83 weekly, but high school male coop ed students in similar jobs were paid only an average of $57

weekly or about 1/3 less.

In blue collar occupations, the spread is even greater. The post-secondary males were paid $83; the high schoolers $50, or nearly 40% less.

Employers in general are reported to pay high school coop ed students less than regular hires and less than college-level coop students even when the job requirements are "identical."

What's even more curious than an absence of good research on coop ed, or even reliable statistics about vocational education, is the fact that almost all school reform reports over the past several years have ignored this thriving portion of secondary schooling.

Those issuing the reports calling for academic and structural reforms of high schools, can not have been deaf to the scathing reports which have been issued about traditional vocational course and shop work, or not known about the many strengths attributed to coop ed.

Yet, the reformers have issued their reports as though there were no vocational classes, programs, teachers, coordinators, shops, centers, and business advisory councils.

Typing, bookkeeping, shorthand, office practices, and cosmetology are vocational courses taken annually by several million high school girls. Automobile mechanics, welding, carpentry, drafting, and electronics classes enroll millions of high school boys.

With the exception of cosmetology (sveral state's requirements prohibit students cooping in private

hairdressing shops), these most popular vocational courses all lend themselves readily to coop ed.

In fact, looking over the list of occupations, the need for students interested in careers in these areas to experience actual job sites seems patently clear.

And also what seems clear is that a way has been found for these students to have a normal social life along with a normal academic experience along with a normal job.

And how much better for all three if the job supports the social needs which are both supported by the academics.

It's estimated that some 2/3 of all teenagers do hold down jobs. And apparently they are sorely needed in the types of jobs they fill.

Coop ed students, by definition, expect to receive training on the job. They do not sign on for dead-end busywork.

Training leads directly to productivity; again, both for the employer and the employee. The National Child Labor Committee has added its voice to a call for universal coop ed for vocational students. They state:

> "A number of national studies comparing the experiences of co-op and non-co-op graduates found that significantly more of the co-op graduates felt well-informed about post-graduation job opportunities and highly prepared for their first jobs.
>
> "Graduates of co-op programs have:

a) a better understanding of the workplace,

b) greater certainty about their career choice,

c) increased work-related competencies, and

d) more experience in the skills involved in searching for a job.

"A typical secondary school co-op student earns almost $1,600 in a year. Given the current estimate of the number of co-op students -- 750,000 -- this represents annual earnings of about $1.2 billion.

"The distinguishing characteristics of cooperative vocational education are that the program is jointly planned, structured, and supervised.

"Further, it involves a written agreement between the school, employer, and student that outlines the planned learning experiences."

Unfortunately the labor market continues to favor white males over all females and minority males, both in hiring practices and in compensation. White males not only earn the higher salaries, but have lower rates of unemployment.

While coop ed can't change the labor market, perhaps one role coop ed could play would be to insist that student for student be treated equally, regardless of sex or race. And that payment for time worked by a coop bookkeeper in a

local bank be color and sex blind.

By insisting on this, schools would go a long way toward eliminating color and sex bias differntial wage schedules now so prevalent nationwide.

As Table 7 amply demonstrates, the salary differential between males and females is striking.

TABLE 7

WEEKLY EARNINGS DURING COOP BY MALE/FEMALES IN 1976 IN SIMILAR OCCUPATIONS

Occupation	Male	Female
Clerical	$53	$34
Sales & Management	57	31
Blue Collar	50	**
Service	42	24

Source: Walsh & Bregglo, 1976

** Insufficient number of females placed in traditional trade & industrial jobs to be statistically significant.

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SOME IMPORTANT RESEARCH QUESTIONS

All Vocational Education Should Be Coop Ed

i. Are there state laws which would prevent this goal? If so, what is best way to have them changed?

ii. If all high school students choose to coop for the final two years of school, what would the projected enrollment figures be year by year over the next 10 years? What would they be if only 90% choose coop ed? If only 80%?

iii. Extrapolating from Para. ii, how many job placements per year would be necessary for the next decade? Figured (a) for single placements; and (b) for paired placements; and (c) for triple placements.

iv. Since college-level coop ed enrollment levels are rising, and since there are a finite number of coop ed placements, at what level of enrollments will college-level job placements impinge on high-school-level placements?

v. Figuring one (1) coop ed counselor (coordinator) for every 40 coop ed students, what is level of hiring need over the next decade based on Para. ii?

vi. What is the level and kind of skill-training need for each of the major coop ed occupations which must be done

within the high school setting and not on the job? Example: typing is a skill which most job sites, hiring a coop student for a position requiring typing skill, would expect the student to have learned before the first day of employment.

vii. Based on data from Paras. ii and vi, for each occupation, how many high-school teachers would be required to meet the need (a) for single job site holders; and (b) for pairs providing the school with only 1/2 coop ed enrollment at any one time?

viii. Based on data from Para. vii, either: (a) How to fill the teacher-quota need? Or (b) What to do with the surplus traditional vocational/technical education teachers?

The Coop Ed Coordinator

ix. What should be the minimum requirements for those selected to hold this position? What course selection as an undergraduate? Is a college degree necessary? Should prior experience as a coop ed student be a requirement? Is this a "certified" job? And if so by whom?

x. Where does coop ed coordinator appear on the high school administrative chart? To whom does coordinator report? Who reports to the coordinator? What is the career path for a coordinator?

xi. What should be the case load? Is 40:1 optimum? And should the case load be based on numbers of students regardless of occupation?

xii. Should the case load be restricted -- where numbers will allow -- to one occupation? Or is an across-occupations case load for some reasons better for both coordinator and students? Or should case loads be deliberately distributed across occupations?

The Coop Ed Seminars or Workshops

xiii. For pre-job placement: Who should staff? Should staff include personnel from job-placement sites? How often meet and for how long? How many should attend? What source materials should be used? Should classes be composed of single-occupation students? Or should classes be deliberately composed of students planning to choose among several occupations? Should credit be given?

xiv. During job placement: Same as in Para. xiii. And in addition: What topics and in what order? What part should student-workers play in setting the agenda? Should same students who met in pre-job placement seminar class meet together during job placement? Or should class members be chosen on a special basis? And if so, on what bases? Should job-site supervisors be required to participate?

Parents of Coop Ed Students

xv. Should parents have a say in choice of coop ed program chosen by the school for their student?

xvi. What percent of parents would prefer students not have any work school-sponsored or school-credited work experience?

Work Sites

xvii. From Para ii, how many work sites would be necessary?

xviii. From employer's point of view, which is optimum: Coops who work (a) Hourly? (b) Daily? (c) Weekly? (d) Monthly? (f) an employer-designated length of time?

xix. Should length of work period and use of paired or single student worker(s) be determined by the employer, and agreed to by school/parent/student? Should it be different for diffrent occupations?

xx. Re: Student Evaluation and Grading. Should the job supervisor's assessment count equally with the academic teachers?

xxi. Re: Grading. Should traditional grading methods and symbols be used by work supervisors? Or should traditional occupational and union skill ratings be used for these student-employees?

xxii. Is there a significant difference between the quality of skills learned in a work-study job and a coop ed job? How measured?

xxiii. Should coop ed students be paid a "spcial less than minimum" wage?

xxiv. Should employers who hire coop ed students receive a tax incentive?

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SOME SIGNIFICANT MILESTONES IN THE HISTORY OF COOPERATIVE EDUCATION IN THE UNITED STATES

1906 Professor of Engineering Herman Schneider at the University of Cincinnati consistently given credit for first providing a cooperative arrangement for students allowing them to alternate work experience with engineering course work.

His definition of coop ed: "...not only help students get jobs, but monitor their performance to assure a correlation with academic course work."

1909 Northeastern University, Boston, College of Engineering adopts the U. of Cincinnati program.

1914 John H. Patterson, president National Cash Register Coroporation, Dayton, Ohio, establishes a coop ed program in a local public high school which today is named the John H. Patterson Cooperative High School, and provides coop ed for all its students.

1916 MIT (Massachusetts Institute of Technology) introduces coop ed into graduate degree programs.

1917 Smith-Hughes Act and Federal Board of Vocational Education encourage coop ed in high schools in the fields of agriculture, trade & industry, home economics, and teacher training.

1919 Drexel University (Philadelphia) begins coop ed.

1922 Northeastern begins coop ed program in business administration.

1922 Antioch (Ohio) organizes its own plan for students to spend supervised work time related directly to academic study. Credited to be the first college to introduce coop ed into the liberal arts, not just engineering and business courses of study.

1932 Bennington College opens and requires (as it does today) a field work term of 8 weeks (30 hours a week) of academically-related work experience for all students.

1957 First national conference on coop ed combining educators and business representatives, sponsored, in part, by the Thos. Alva Edison Foundation.

1958 A kind of dividing line discussion roiling among colleges between use of coop ed as an economic help for financially needy students, and use of coop ed as a marriage between theory and practice and as a philosophy of education.

1959 Coop ed now introduced to some 55 colleges, primarily in business and engineering schools and departments.

1961 Wilson & Lyons evaluation study of coop ed, sponsored by the Ford Foundation.

1962 Formation of the NCCE (National Commission on Cooperative Education) under the direction of Ralph W. Tyler.

1965 Coop Ed funding included in the federal Higher Education Act.

1966 Some 272 high schools in New Jersey offer coop ed with funds and encouragement from the New Jersey Department of Education. Students work a minimum of 15 hours a week supervised by certified teacher-coordinators.

1968 Northeastern establishes an endowed chair for a Research Professorship in Cooperative Education.

Some 1% of federal college-level work-study funds allocated to coop ed ($1.5 M).

1970 200+ colleges offering coop ed.
298,915 secondary school students enrolled in coop ed.

La Guardia Community College (New York) opens and requires coop ed for all full-time students, the majority of whom are from minority low-income families.

LaGuardia's Middle College High School requires one coop ed experience for all full-time students.

1972 College-level coop ed allocated $10,750,000 from federal work-study funds.

1973 School coop ed federal funding reaches $24.7 million; drops down to around $19 million from 1974 through 1978.

1974 First year more than 6% of vocational students enrolled in coop ed secondary school programs (6.7%).

1975 Some 1,000 colleges and universities offer coop ed.

1975 A. Fredericks, in her history of Northeastern University, gives the following definition of coop ed: "A unique teaching/learning process that alternates periods of supervised work with periods of academic study."

1976 Northeastern opens five offices housing more than 100 professionals:
Dep't of Coop Ed
Dep't of Graduate Placement
Center for Coop Ed
Cooperative Education Research Center
Center for Secondary School Work Experience

Northeastern uses a six-month, full-time alternating pattern after the freshman year for all undergraduates.

1976 Coop ed a line item in Title VIII of Higher Education Act Amendments.

Thirty case studies compiled from 19 secondary and 11 post-secondary coop ed programs involving 675 coop students, and 774 traditional vocational students, confirmed in a follow up that coop students, more than control group, "had positive attitudes" and a "higher percentage of employment after graduation."

1977 Definition proposed by the Cooperative Education Association: "...the integration of classroom theory with practical work experience under which students have specific periods of attendance...and specific periods of employment."

1978 Passage of the Targeted Jobs Tax Credit allowing employers to receive a federal income tax credit equal to 50% of the first $6,000 paid to coop employees.

Publication of the Frankel, Cohen, Dean "National Assessment of Cooperative Education," supporting coop ed as cost effective for both students and employers.

1980 Five (5%) or ten (10%) of 12,000,000 secondary school vocational students enrolled in coop ed programs. (See Tables 1, 2, 4, and 5).

Approximately 200,000 college students in coop ed

University of Detroit establishes, in all disciplines, a mandatory coop ed program for all undergraduates.

1980 Approximately 1,000 New York City businesses and 35 governmental agencies accept 12,500 students from 86 of New York's 100 high schools in parallel or alternating coop ed programs. An evaluation of the coop ed programs reveals that 95% of the coop students complete high school, considerably above the average New York City public school student population.

Drake University (Des Moines, IA) begins a coop ed demonstration model for assessing student's performance using traditional examinations, competence scales, research papers, reading assignments, and logs.

1981 Under Title VIII, $23 million spent to support some 245 college-level coop ed projects.

1984 A National Center for Research in Education study of long-term effects of vocational education (R&D Series No. 246) concludes: "Vocational graduates in most program areas have greater long-range earnings and less unemployment than general curriculum graduates."

A National Center for Research in Education study of vocational students and the labor market (R&D Series No. 244) argues that "cooperative jobs seem to have a unique potential for providing on-the-job training. Their values would be enhanced," the report concludes, "by policies that stress placing students in jobs that offer opportunities for training."

1985 Graduate level coop ed now in 179 degree-granting universities w/some 3,500 students.

Publication of "Second to None: 75 Years of Leadership in the Coop Ed Movement," J. E. Barbeau, Northeastern Univ.

A National Center for Research in Education study (Information Series No. 304) entitled "Education and Work," reported that "the most important employability skills are learned not at home, nor at school, but on the job."

1986 An estimated 3/4 million high schoolers in coop ed.

Definition by Marion R. Craft, Education Program Specialist, Cooperative Education, Work Experience, and Work Study Programs in the ED Division of Vocational Education: "Co-op integrates classroom theory with practical work experience. Through the interaction of vocational education, academic study, and work experience the students enhance their knowledge, their personal development, and their professional preparation."

1987 In Reagan budget for FY 88, no funds allocated for coop or vocational-technical education at the secondary level.

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CYNTHIA PARSONS' varied career in education began with over 15 years of high school teaching experience. In 1962, she became Education Editor for The Christian Science Monitor, winning national recognition for her series, "Schooling for Skills." In 1969, Ms. Parsons published Schools Can Change and subsequently served for 3 years as Senior Program Officer at the National Institute for Education.

During a second eight-year tenure at the Monitor, Ms. Parsons' work again earned numerous awards, including several from the Education Writers' Association, and the American Association of University Professors.

Recently, Ms. Parson has worked in higher education in Australia and Turkey, and has taught at the University of Vermont and Dartmouth College.

Ms. Parsons graduated from Principia College in 1948, later earned a Master's degree from Putney College and, in 1985, was awarded an honorary doctorate from Norwich University. She has received fellowships from the Carnegie Corporation, Ford and Mott Foundations. Currently, she is writing two books dealing with national and community service under a grant from the Edwin Gould Foundation for Children and is the coordinator of SerVermont, a statewide community service paper.

A COMMENTARY

on Cynthia Parsons'

THE BRIDGE - COOPERATIVE EDUCATION FOR ALL HIGH SCHOOL STUDENTS

by Roy L. Wooldridge

Overall, this is an excellent piece of work. The author makes a strong case for the use of cooperative education as an essential ingredient in preparing all high school students for useful roles in their adult life. It is difficult for me to find fault since I have spent the past 25 years preaching the same gospel on the post-secondary level.

The Commission's six basic questions have been handled very thoroughly. The author cites knowledge gained from research and experimentation. There are examples of practical applications of forms of cooperative education. Choices for further action are presented and additional research and study are recommended when appropriate. The author presents divergent points of view and makes her own recommendations clear. However, I am troubled by what appears to me to be a shift of focus. At the beginning of the paper, particularly in the first three subject areas, Ms. Parsons makes a compelling case for some form of cooperative education for all high school students. As the paper unfolds through the later subject areas, her focus seems to be increasingly on vocational education programs. I am not sure why this shift occurs. It could be that the author recognizes that co-op education can be more readily expanded in the vocational education area and elects to concentrate her ammunition on this sector of secondary education.

There are two problems related to cooperative education that are not sufficiently treated by the author. First is that the coop program subjects the educational institution to the variations in the economic cycle. The key ingredient is the location of suitable work stations in business, industry and

the professions. The availability of these work stations varies with the rise and fall of employment within a community. If the program is required as a part of the curriculum, then stations must be found even during recessions. This frequently means some sacrifice in the quality of the learning experience in order to accommodate the numbers.

The second problem is relations with unions. This is particularly true at the secondary school level and the author did not give it enough weight in her discussion. Unions must be included with school authorities and employers in the program design and development. Work stations in the skilled trades will be hard to come by if there is strong union opposition. Furthermore, teachers' unions will have a great deal to say about lengthening the school year or increasing the teachers' work load.

When discussing the various models of cooperative education, not enough stress is placed on the possibility of year-round coverage of the work stations, thus opening up year-round operation of the schools. This was a fundamental discovery in the development of cooperative education at the post-secondary level. If the objective is to develop paid positions with employers, then some kind of year-round coverage must be designed to attract employers. Two students fill one job for the entire calendar year through some process of alternation. Employers tend to favor as long a cycle as possible, so six weeks, as suggested in the chapter, may be a bit too short.

This lack of emphasis on year-round coverage may help explain why the retailing and distribution field has been most receptive to cooperative education at the secondary school level. That industry can easily accommodate part-time help. There are others that can, too. However, the vast majority of American industry, business and the professions need full-time employees on a year-round basis.

There is an interesting spin-off that would result from year-round operation of secondary schools. There would not be the very large-scale dumping of employable persons on the labor market in the summertime. Every year, it seems, the nation struggles with the problem of finding jobs for youth in the summer. On some occasions, there has been cause for concern about disruption in major cities on hot days. No one ever seems to ask the question as to why schools are closed from June to September. We are no longer an agricultural society and no longer need the young people to work the farms. In addition, air conditioning has allowed us greater control of the interior conditions within a building. Perhaps, year-round schooling would be a worthwhile investment from an economic as well as an educational point of view.

Our experience on the post-secondary level is that one coordinator can handle approximately 150 students per year, one half of these students at work and the other half in school. Some institutions will run even higher loads than that. However, it is possible that secondary school cooperative education requires much more coordination since the students are young and less seasoned. Perhaps the ideal load will vary from school to school, but will fall somewhere between the 40 students mentioned in the paper and the 150 students suggested here. Once again some stress needs to be placed on appropriate discourse with representatives from the teachers' unions. They will have strong feelings about issues such as coordinator work loads and the possibility of generating funding for the program through cut-backs in teaching positions. It is wise to be cautious about calling for too-frequent employer visits by the coordination staff of the school. Experience in higher education indicates that potential employers will be turned off by too-frequent visits which can be viewed as interference in carrying out their responsibilities. This situation will be exacerbated in the case of placing the less-talented students. Employers of well-qualified students will put up with more interference since the potential acquisition of bright

talent will be judged to be worth the price.

The chapter entitled "Work/Study * Experiential Education * Coop Education" is the chapter that I found most in harmony with my own thoughts about and experiences with cooperative education. Differing viewpoints are presented in a very open way. Impressing me favorably were the arguments for a more Socratic teaching method, the need for stability on a job to be long enough to yield in-depth experience, and the desirability of changing the content of the experience from observation to productive work at the grade 11 level. In particular I liked very much the "Jim story" that closed the chapter.

In general, the paper contains a fine overall summary of research questions that need to be examined in the field of cooperative education. Let me add a comment or two about specific numbered items. It seems to me XI needs to be looked at before V. Earlier in this commentary, I raised the question of optimum work load. Research needs to be done to determine this workload. Then one can begin to study, as in question V, the level of hiring needed over the next decade. Following item VIII, I believe there are three more questions that need to be examined. First, what economic indicators can be used as predictors of the number of work stations that can be developed in a given economic community? Can a formula be developed that would allow each community to assess its chances for success?

Second, how best to convince unions about the desirability of encouraging the employment of students?

Third, how best to convince teachers' unions to accept the flexible approaches needed with regard to workload for the classroom teachers and the vocational/technical education teachers?

Overall, I find that I have two disappointments. One is that I did not find a strong enthusiastic finish to the paper. It trailed off over the final chapters on funding and research. It just seems to me that with all of Ms.

Parsons' positive belief in cooperative education, the paper should have ended with a strong statement of direction.

My second disappointment, probably related to the first, is that the paper makes a strong case for cooperative education, perhaps even too repetitiously, and offers no plan for implementations. I know Ms. Parsons stated at the beginning that the purpose of the paper was to start a dialogue. However, sometimes the very best policies can be enunciated and even command widespread support but fail through the difficulties of implementation and/or administration. In today's world one only has to view the noble goals of peace in Ireland or peace in the Mid-East and recognize the difficulties in achieving these goals due to problems in implementation. The goal of widespread use of cooperative education for high school students is and will continue to be as difficult to achieve.

ROY L. WOOLDRIDGE is Vice President for Cooperative Education, Northeastern University, where he has directed the Coop ed program since 1953. (Northeastern's coop program enrolls 9,000 students and has 65 professional support staff.) He was Executive Director, National Commission for Cooperative Education (1973-77) and President of that Commission (1977-83).

A COMMENTARY

on **Cynthia Parsons'**

THE BRIDGE - COOPERATIVE EDUCATION FOR ALL HIGH SCHOOL STUDENTS

by **David H. Lynn and Dennis Gray**

By mistaking means for ends, and by making universal claims for a concept that cannot bear such weight, Cynthia Parsons' "The Bridge: Cooperative Education for All High School Students" undermines its own best case--that cooperative education programs offer substantial benefits over traditional vocational education and may indeed help address two of the most pressing problems for American youth: drop-outs and unemployment.

A fundamental shortcoming of the "The Bridge" involves the role and purpose of schooling. For we strongly disagree with the vision implied in the rhetorical question on p. iii: "Will schools accept the challenge that they must prepare their students for jobs and careers, and that they must guide and supervise on-the-job training while students are still under their care?" The supposition that schools should play this role underlies the entire report. And that argument reflects one pole of a disagreement about the purposes of education that has plagued our schools for a hundred years and has led to an amorphous, unfocused, often contradictory pastiche of bits and pieces in the curriculum, what has come to be known as the "shopping mall" school.

The focus of the argument centers on how students, all students, are best served, whether by a liberal arts education which can be seen as an end in itself -- which will lead to other ends -- or by a "practical" education that will prepare students to move directly into specific jobs. That latter role has traditionally been played by vocational or, less often, cooperative education.

We believe, however, that the dichotomy is false, even pernicious. For a basic education in the liberal arts is, when well conceived and well taught, the

most practical as well as the most fulfilling type of schooling. Through it students learn not only primary skills of reading, writing, and numeracy, nor merely the secondary skills of problem solving and critical thinking, but the foundation to be lifelong learners, whether tackling new challenges on the job or discovering new fields on their own time for the simple love of it.

Such an education is truly the most practical of beginnings.

E. D. Hirsch makes a similar and compelling case in his recent book Cultural Literacy: What Every American Should Know. The point of Hirsch's argument is not elitist. Indeed, its most pressing significance is for the poor and disadvantaged in this country, children who grow up in atmospheres thin with the information, the background, the modes of understanding, that represent a national currency of exchange, without which economic success, not to mention basic communication beyond one's doorstep, becomes nearly impossible. As Hirsch argues, "teaching cultural information in the early grades would do more than just improve the reading performance of all our children. By removing one of the causes of failure, it would especially enhance the motivation, self-esteem, and performance of disadvantaged children." (p. 28)

Perhaps the most remarkable national report on education of recent years has been Investing in Our Children: Business and the Public Schools from the Committee on Economic Development. Here, from a group of leading business people, is a frontal assault on the shortcomings both of public schooling in general and, specifically, of traditional vocational programs:

> Unfortunately, whether measured by future earnings, job placement, or employment success, there is today little evidence that vocational education is either meeting the needs of students or of the employers who are expected to hire them. Moreover, vocational education too often perpetuates sex role stereotyping and tracking of minorities into inferior programs. (p. 30)

"The Bridge" usefully quotes extensively from Investing in Our Children in support of cooperative education. But it ignores the document's clear statement on the purpose of schooling. That this statement should come from leaders of the

business community is surely a signal event:

> Business in general is not interested in narrow vocationalism. In many respects, business believes that the schools in recent years have strayed too far in that direction. For most students, employers would prefer a curriculum that stresses literacy, mathematical skills, and problem-solving skills; one that emphasizes learning how to learn and adapting to change. (p. 15)

Those needs and goals are, unquestionably, best met by the liberal arts within a unified and coherent curriculum. And every aspect of a school's program should be focused on meshing with and strengthening that curriculum. Specialized programs, therefore, whether in a "magnet" school stressing the sciences or in a cooperative initiative involving students during their last years in high school, must be seen as viable only to the extent that they ensure a student's mastery of the basic curriculum and build on it.

In essence, "The Bridge" calls for cooperative education to become an integral part of that core or basic curriculum for all students. What, we wonder, is the need for diverting <u>all</u> 11th and 12th graders away from what schools presumably can or should do best into an activity whose purposes -- preparation for work, training in specific skills, the learning of "positive behaviors" -- can be accomplished by many means, <u>one</u> of which is cooperative education?

This brings us to a central fallacy of "The Bridge," one that, again, undermines the very real value of the programs it intends to endorse: that the only way to learn work-related skills and such attitudes as "knowing what it is to follow orders, pay attention, be part of a working team" (p. 13), is by participating in a coop program. We dare suggest that more than a few people learn those traits elsewhere and that, if a school is doing its primary job satisfactorily, they will. And, of course, many other activities offer similar lessons: the scouts, team sports, the arts, and so on.

The CED report rightly identifies many of these values and behaviors as belonging to an "invisible curriculum." Schools teach critical lessons outside

of classwork. If tardiness is ignored, vandalism merely repaired, scholarly achievement not expected or valued, honesty not demanded, discipline not consistent, fair, and predictable, students will learn a view of allowable behavior that is skewed. Coop programs can and should certainly work to reinforce more productive behavior, but here, too, the role of the coop is secondary to the larger purpose of the school, not the reverse. As Investing in Our Children puts it:

> Such traits as honesty, reliability, self-discipline, cooperativeness, competitiveness, and perseverance are as important to continued scholarship and responsible citizenship as they are essential to success in the workplace. Schools have a responsibility -- and an opportunity -- to help instill these habits. (p. 20)

All of this said and done, however, the discussion of cooperative education in "The Bridge" is timely and often persuasive. Unquestionably, many students can benefit from programs that build a meaningful bridge from the world of school to the world of work. A purely academic curriculum simply will not meet the needs of all older students. One of the great challenges before us is to design programs that will keep many young people in school long enough to learn basic skills of reading, writing, and numeracy. One way to do this may be to appeal to their immediate occupational interests and to their hopes of future jobs.

This is especially true for students at risk, those who in recent years have left schools all too often before graduating and who remain unemployed, under-employed, or trapped in dead-end jobs. Perhaps the single most telling quotation in "The Bridge" is from Stephen F. Hamilton who describes the fate of many teenagers as "floundering" between school and work, lapsing finally into a secondary labor market in which "the absence of training and advancement opportunities are the most critical features." (p. 23)

The critique of traditional vocational programs here is valid and long overdue. Out-dated equipment, inadequately trained teachers, lack of purpose and

direction, emphasis on skills that have no direct application to the needs of the workplace; all of these are widespread and dramatic shortcomings of vocational education. Cooperative programs, supported by coalitions of schools, parents, and businesses can offer productive alternatives. Because "The Bridge" spells these out at length, we will not cover the same ground again.

But the single greatest flaw of traditional vocational programs arises out of the "tracking" characteristic of most American high schools. "The Bridge" describes the "collegiate," the "general," and the vocational categories. Almost invariably this practice has led administrators to treat the vocational track as a place to dump trouble; there they assign the students with learning disabilities, disruptive behavior, and others for whom they have no expectations for academic success. Thus, vocational education, whatever its intrinsic merits or flaws, has been almost a prescription for disillusionment and failure.

This fact stands as an indictment of the tracking common in many schools. But it also offers a stern warning to cooperative programs: they must be developed consciously so as to avoid the same trap of becoming the refuse heap for a growing number of our country's most vulnerable young people.

DENNIS GRAY is Deputy Director and Director of Programs for the Council for Basic Education. He is also a member of the Paideia Associates.

DAVID H. LYNN is Editor of the monthly journal Basic Education.

A COMMENTARY

on Cynthia Parsons'

THE BRIDGE - COOPERATIVE EDUCATION FOR ALL HIGH SCHOOL STUDENTS

by Morgan V. Lewis

The subtitle of The Bridge, Cooperative Education For All High School Students, indicates clearly that Cynthia Parsons is an advocate of cooperative education who wants more students to benefit from this type of educational experience. Her paper presents arguments, based primarily on examples and assertions, to support her recommendation.

In this reaction I take another perspective in arguing the case for a more measured expansion of what I, too, believe can be a beneficial educational experience.[1] My response is not a critique of the paper, per se. Instead it is an examination of the claims for cooperative education that underline Parsons' position and a review of the research evidence relevant to these claims.

First let me state Parsons' position as I understand it: Cooperative education involves the teaching and reinforcing of basic communication and computation skills, interpersonal and job-holding skills (such as cooperation and dependability) and specific job skills through a combination of classroom instruction and guided work experience. Classroom instruction, however, would not include job-specific skills which would be taught only on the job. Cooperative job placements should involve extended experience in a limited number of work settings and should take place in the eleventh and twelfth grades. If students have such experiences, they will be able to apply the general skills they learn in school and make the transition from education to employment more easily. The "floundering" period that many young people undergo

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[1] I wish to acknowledge additional reviews of The Bridge by Roy Butler and Richard Miguel, also of the National Center, which were shared with me. This commentary, however, is a personal reaction and not necessarily the official position of the National Center.

when they leave school will be minimized or eliminated, especially for those who have the hardest time finding jobs and eventually become the hard-core unemployed.

In addition to these benefits for young people, employers will have better trained workers who have studied the processes and equipment actually used in the work place. Schools will save the costs of building and equipping vocational classrooms and some of the costs of teacher salaries.

These are certainly impressive benefits and, if cooperative education could deliver them to the extent Parsons claims, it seems likely that far more students would currently be enrolled in these programs. The evidence I am familiar with, however, shows much more modest effects. I shall briefly summarize this evidence and then turn to what I consider a more *fundamental constraint that limits major expansion of cooperative education -- the willingness of employers to assume an expanded role in skill training.*

Effects of Cooperative Education

Let us try to take the role of educational policymakers who are evaluating Parsons' recommendation that all high school students should participate in cooperative education. If these policymakers are well-informed, they will know that about two-thirds of high school students already hold part-time jobs, but only about one-sixth (15%) are in jobs where they receive some supervision from school personnel. (Lewis, Gardner and Seitz, 1983). The decision makers will want to know what additional benefits the remaining 85% of students are likely to receive from school-involvement and the probable costs of such involvement. Specifically, concerned policymakers would want to know the effects of cooperative education in at least four areas:

- o Basic communication and computation skills
- o Employability (job getting and job holding) skills
- o Occupationally-specific skills
- o Post-high school education and employment

I shall summarize the evidence in these four areas that I am familiar with from related studies and syntheses.

There is little evidence available about the effect of cooperative education on the attainment of basic academic skills. One study by Crowe and Veach (1986) suggests that the cooperative experience has no significant effect on reading skills and has a negative effect on mathematics skills for females and minorities. (The researchers who obtained these results caution against overgeneralizing them; the students were all from one large city and the standardized achievement tests that were used may not have adequately assessed the academic skills acquired in a cooperative work setting.)

Two other studies observed and categorized the activities cooperative students engaged in at their work sites but did not assess learning of basic skills. Crowe, Abrams and Bart (1984) found fairly high involvement in tasks that used basic skills; however, the skill levels required were generally low. Franchak, Norton and Desy (1985) report a similar finding and further note that much of the work experience did not seem to contribute to learning. The programs that Franchak and his colleagues observed had been nominated by state educational officials as high quality programs.

Syntheses of the evaluative research on cooperative eduction agrees that it contributes to employability skills and post-high school employment. (Brailsford, 1982; Crowe and Adams, 1979; Wood, 1979). This contribution is usually measured by indicators such as knowledge of occupations, employment in jobs related to training, and amount of time unemployed after leaving high school. No study, to my knowledge, has specifically examined increase in occupational skills as a result of cooperative education.

These findings generally support Parsons' concept of cooperative education as a bridge connecting education and work. At least some of the employment benefits are due to the job placement aspects of these programs. Many employers

use cooperative education as a way of screening prospective employees who often remain with these employers after leaving school (Lewis, et al. 1976).

As Parsons notes, the research evidence is far from complete. Even in the studies that have been done, much learning may have taken place that the usual assessment techniques measured poorly, if at all. In a repetitive job, for example, a young person may acquire the skills needed to persist at tasks with little intrinsic appeal -- skills that are useful in many endeavors in life. Despite the weaknesses in the evidence, however, these findings provide an alternative perspective to what I consider the overly optimistic portrayal of the potential benefits of cooperative education reflected by Parsons' paper.

Parsons also claims that cooperative education will save money, because it will not be necessary to build and equip vocational classrooms and fewer teachers will be needed. The only study of the costs of cooperative education that I am familiar with is one which I directed (Lewis, et al. 1976). That study found cooperative education was more costly than regular classroom instruction, because the costs of the coordinators, school personnel who arranged and monitored job placements, were an addition to the classroom costs. Cooperative education supplemented the classroom; it did not replace the classroom. If employers were willing to assume the full responsibility for occupational skill training, vocational classrooms would not be needed and cost savings would be possible. It is to the question of employer willingness to train that I now turn.

Willingness of Employers to Train

There are considerations arising from the nature of our economic system that lead me to be skeptical about the possibility of a major expansion of cooperative education. A basic tenet of our economy is that the operation of free markets is the most effective way to set priorities and allocate resources. The primary role of public policy governing the economy is to encourage free

markets and to ease the hardships that their operations sometimes cause.

This policy extends to labor markets where national policy has generally encouraged occupational and geographic mobility of workers. This policy has enabled the economy to change rapidly and has avoided the problems of shortages in critical skill areas. If shortages develop, jobs are modified and workers with related skills are reassigned. The policy does, however, reduce the incentive for employers to offer training in occupations that require extensive preparation before a worker becomes productive. With high rates of job change, employers may not realize a return on the costs of such training. Extended training is a risky investment which relatively few employers are willing to make. Katz (1986) and Lazear (1986) have examined the evidence of this topic.

It is these characteristics of the labor market that, in my judgment, explain the willingness of our society to provide the wide array of opportunities for institutionally-based vocational-technical training available in this country. The training that public institutions provide offers the individuals who obtain jobs that use their training an advantage in the competition for the preferred jobs in our society. Employers who hire trained workers benefit from their increased productivity (Bishop 1982). The private and social losses incurred by individuals who do not obtain jobs related to their training are borne directly by these individuals and only indirectly by employers and the public, in general, through the taxes they pay.

These characteristics have also made it difficult to expand cooperative education. In the 1968 amendments (P.L. 90-576, Part G) to the Vocational Education Act of 1963, Congress provided a financial incentive to encourage cooperative education, but the results were only marginal, as reflected by the enrollment bulge in Parson's table 6.

The most extensive test of the willingness of employers to offer part-time employment to students was conducted as part of the Youth Incentive Entitlement

Pilot Projects (Gueron, 1984). These projects guaranteed part-time jobs to disadvantaged young people who agreed to continue their education. To assure enough jobs, the projects offered 100% wage subsidies to private employers. In two sites, the effects of offering lower subsidies were tested. In these two test sites, 18% of the employers offered the full 100% subsidy agreed to sponsor a participant; the rate fell to 10% with a 75% subsidy and to only 5% with a 50% subsidy.

These figures probably reflect minimum levels of the willingness of employers to offer part-time jobs, because young people from disadvantaged backgrounds are not viewed favorably by many employers. One experimental study of job-seeking by disadvantaged young people (Burtless and Cheston, 1981) found that those who told employers they were eligible for wage subsidies were less likely to be hired than similar eligible youngsters who did not provide this information. These findings do not lead to much optimism that cooperative programs would be able to serve large numbers of those young people who have the most difficulty succeeding in school and making the transition from education to employment.

The reluctance of many employers to offer training to young people stems also from the frequent job changes in the years right after high school. This is the period that career theorists have labeled as the exploratory/transition stage of career development (Osipow, 1983) and that Parsons, following Hamilton (1986), refers to as "floundering." Despite the apparent erratic nature of many of the job changes during this period, they do enable young workers to test their interests and aspirations against the realities of the labor market. As young people develop a better sense of what they want from jobs and what is available to them, they do become more stable and hence more attractive to employers. Their increased employability is dramatically reflected in the unemployment rates for those 20 and older which are one-third the level for

teenagers. This relationship holds for minorities as well as whites, even though the level of minority unemployment is over twice as high for both age groups.

In conclusion, even if all the benefits claimed by Parsons were firmly documented, an expansion of cooperative education of the magnitude she recommends is highly unlikely. Some expansion is certainly possible through more active recruitment of employers. A significant expansion, however, would require major changes in labor market policies that would place significantly greater training responsibility on the private sector and sanctions on individuals who voluntarily changed employers after being trained. The probability of such changes in our society appear very low.

DR. MORGAN V. LEWIS is a research scientist with the National Center for Research in Vocational Education, The Ohio State University. He directs a program that develops information for national planning and policymaking in vocational education. Prior to joining the National Center, Dr. Lewis was associated with the Institute for Research on Human Resources of the Pennsylvania State University. Dr. Lewis has served as principal investigator of many studies of vocational education and employment and training programs including evaluations, needs assessments, planning studies, and futures research.

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